water & sanitation
Department:
Water and Sanitation
REPUBLIC OF SOUTH AFRICA

Private Bag X313, PRETORIA, 0001, 185 Francis Baard Street, Sedibeng Building, Pretoria
Tel: 012 336 7500 Fax: 021 323 4472/012 326 2715

LICENCE IN TERMS OF CHAPTER 4 OF THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) (THE ACT)

I, **Mr Moses Sipho Skosana** in my capacity as Chief Director: Water Use Authorisation Management in the Department of Water and Sanitation and acting under the powers delegated to me by the Minister of Water and Sanitation, hereby authorises the following water use in respect of this licence.

Serial Number : 4837420806775042438
Chief Director: Water Use Authorisation Management
Date: Mar 2 2025 11:16PM

LICENCE NO: 06/B41J/ACEGJ/15812
FILE NO: 27/2/2/B941/33/1
WUA NO: WU37864

Licensee: Modikwa Platinum Mine (Pty) Ltd

Postal Address: Private Bag X9120
Driekop
Mpumalanga
1129

Physical Address: 292 KT Onverwacht Hill Steelpoort Region
Mpumalanga
1150

B16367

CD: WUAM

1. Water Uses authorised by this licence

Table 1: Summary of Authorised water use activities

1.1	Section 21(a) of the Act	Taking water from a water resource, subject to the conditions set out in Appendices I and II.
1.2	Section 21(c) of the Act	Impeding or diverting the flow of water in a water course; subject to the conditions set out in Appendices I and III.
1.3	Section 21(e) of the Act	Engaging in a controlled activity, subject to the conditions set out in Appendices I and IV
1.4	Section 21(g) of the Act:	Disposing of waste in a manner which may detrimentally impact on a water resource, subject to the conditions as set out in Appendices I and V.
1.5	Section 21(i) of the Act:	Altering the bed, banks, course or characteristics of a watercourse; subject to the conditions set out in Appendices I and III.
1.6	Section 21(j) of the Act:	Removing, discharging or disposing of water found underground, subject to the conditions set out in Appendices I and VI

2. Property (ies) in respect of which the water use licence is issued

Table 2: Property details where the water use(s) will take place

Activity	Farm Name	Farm Portion	Owner's Name	Title Deed Number
Section 21(a)				
	Winterveld 293 KT	0	Samancor Chrome Ltd	T0KT00000000029300000
Section 21 (c) & (i)				
	Winterveld 293 KT	0	Samancor Chrome Ltd	T0KT00000000029300000
Section 21(e)				
	Winterveld 293 KT	0	Samancor Chrome Ltd	T0KT00000000029300000
Section 21 (g)				
	Winterveld 293 KT	0	Samancor Chrome Ltd	T0KT00000000029300000
Section 21(j)				
	Winterveld 293 KT	0	Samancor Chrome Ltd	T0KT00000000029300000

3. Licence and Review Period

3.1 This licence is valid for a period of twenty (20) year(s) from the date of issuance and it may be reviewed at intervals of not more than five (5) years.

3.2 On review of the licence, a Responsible Authority may amend any condition of the licence, other than the period of validity thereof.

4. Definitions

Any terms, words and expressions as defined in the National Water Act, 1998 (Act 36 of 1998) shall bear the same meaning when used in this licence.

4.1 The following definitions are of relevance, but not exclusive, to this licence

Act	National Water Act, 1998 (Act 36 of 1998)

CD: WUAM

Buffer Zone	A scientifically determined area where water use activities are excluded.
Delegated Authority	The person that has been delegated certain functions of the Act
Department	The Department of Water and Sanitation
Commencement date	The date on which water use starts.
Days	Calendar days.
Minister	Minister of the Department of Water and Sanitation.
Head of Provincial Operations	Head of Provincial Operations Mpumalanga, Department of Water and Sanitation, Private Bag X11259, MBOMBELA 1200
Responsible Authority	"Responsible authority" in relation to a specific power or duty in respect of water uses, means (a) if that power or duty has been assigned by the Minister to a catchment management agency, that catchment management agency; or (b) if that power or duty has not been so assigned, the Minister
Riparian habitat	"Riparian habitat" includes the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterised by alluvial soils, and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas.
Sensitive riffle habitats	A pool riffle rapid sequences that occur where a mixture of flows and depth provide a variety of habitats to support fish and invertebrate life. Pools are deep with slow water. Riffles are shallow with fast, turbulent water running over rocks. Runs are deep with fast water and little or no turbulence.
Watercourse	"Watercourse" means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks.
Extent of the watercourse	(a) the outer edge of the 1:100 year floodline or the delineated riparian habitat, whichever is the greatest, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; and (b) Wetlands and pans: the delineated boundary (outer temporary zone) of any wetland or pan.
Regulated area of a watercourse	(a) The outer edge of the 1 in 100 year flood line and /or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; (b) In the absence of a determined 1 in 100 year flood line or riparian area the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act); or

	(c) A 500 m radius from the delineated boundary (extent) of any wetland or pan.

5. Description of activity and affected water resource(s)

This licence authorises Modikwa Platinum Mine Joint Venture JV for Section 21(a), (c), (e), (g), (i) and (j) water uses. The activity is for mining Platinum group metals (PGMs) using opencast mining on the farm Winterveld 293 KT of Sekhukhune District Municipality in the Limpopo Province within B41J Quaternary catchment.

CD: WUAM

APPENDIX I

GENERAL PROVISIONS AND CONDITIONS OF THE LICENCE

1. GENERAL PROVISIONS

Legal Framework

1.1 This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998) as amended from time to time.

1.2 The licence shall not be construed as exempting the Licensee from compliance with the provisions of any other applicable Act, Ordinance, Regulation or By-law.

Administrative duties/obligations/responsibilities of the Licensee

1.3 The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.

1.4 The licensee will be responsible for any water use charges or levies imposed by a Responsible Authority according to the pricing strategy. The levies/charges will be charged from the date of the issuance of this licence.

1.5 No water taken may be pumped, stored, diverted, or alienated for any other purpose other than as intended in this licence without the written approval of the Delegated Authority.

1.6 It is the responsibility of the licensee to request an amendment of this licence to reflect the registered volume should the requirements change. All requests must be made to the Head Provincial Operations: Mpumalanga.

1.7 If the water use licence is not exercised or fully exercised within the 5 (five) year period and the extended 2 (two) year period, as referred to in condition 2.4 and condition 2.5 in appendix I, the licence may be amended to reflect the extent of the water use that is being exercised, or the licence may be withdrawn.

Change of property details

1.8 Amendment of the licence to reflect the name of the new owner will not be approved if there are any outstanding charges or levies imposed by the Responsible Authority to the previous owner.

Issue of licence no guarantee of supply

1.9 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.

Monitoring

1.10 The quantity of water authorised to be taken in this licence may not be exceeded.

1.11 The quality of water authorised to be disposed and discharged in this licence may not be exceeded.

CD: WUAM

1.12 Any changes to the monitoring programmes should be approved by the Head Provincial Operations: Mpumalanga.

Reviewal of licences

1.13 The volume authorised in this licence may be reduced when the licence is reviewed.

1.14 No water taken may be pumped, stored, diverted, or alienated for any other purpose other than as intended in this licence without the written approval of the Delegated Authority.

Effecting of the Reserve

1.15 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.

Liabilities and Rights

1.16 The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of, shortage of water; inundations or flood; siltation of the resource; and required Reserve releases.

1.17 The Minister reserves the right to construct water storage works at any time in any watercourse and to store all surplus water reaching the storage works, as well as to control the allocation of such water.

Dam Safety Requirements

1.18 The licensee is not indemnified from any detrimental effect that the dam(s) may have on other properties.

1.19 The Department does not accept any responsibility or liability for any damages or losses that may be suffered by any other party because of the construction and utilisation of the dams.

1.20 The licensee is not exempted from compliance with the provisions of the Dam Safety Regulations published under Government Gazette Notice R.139 of 24 February 2012 or any amendment thereof read with Chapter 12 of the Act, which are applicable to all dams with a safety risk.

Restrictions

1.21 The licensee must adhere to any restrictions that are gazetted and imposed on the respective water resource.

Water measurement and reporting

1.22 The Head Provincial Operations: Mpumalanga may at any time direct a licensee, at the licensee's expense, to have the accuracy of the licensee's water measuring device/s verified, in addition to the requirements of their inspection and calibration schedule by a person or an institution accredited to verify the accuracy.

CD: WUAM

Stormwater Management

1.23 Stormwater 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, spilled on the premises.

Amendments

1.24 The licensee may apply for amendment of this licence in terms of the Act at any time during the period of validity of this licence. Applications must be submitted to the Head Provincial Operations: Mpumalanga

Appeals

1.25 If this licence is appealed, it is automatically suspended and the water use activities must cease upon receipt of a notification of the appeal from the Department, alternatively the licensee may request the Minister to lift the suspension pending conclusion of the appeal via the Chief Director Legal Services at the address below:

Private Bag X313,
Pretoria,
0001

2. GENERAL CONDITIONS

Administrative duties/obligations/responsibilities of the Licensee

2.1 The licensee must avail an original copy of the water use licence and the supporting reports upon request by the Department.

2.2 The conditions of the authorisation must be brought to the attention of all persons (employees, sub-consultants, contractors etc.) associated with the undertaking of these activities and the licensee must take such measures that are necessary to bind such persons to the conditions of this licence.

Commencement of water use licence.

2.3 The licensee must inform the Head Provincial Operations: Mpumalanga in writing within seven (07) days after the licensee commences with water use licence and again within thirty (30) days upon completion of the activity/ies.

2.4 The water uses authorised in this licence must be fully exercised within five (5) years from the date of issuance of this licence.

2.5 If the licensee cannot exercise or not fully exercise the water use licence within 5 (five) years, the licensee may request from the Head Provincial Operations: Mpumalanga, with reasons, an extension of time to fully utilise the said water use licence, at least three months, before the expiry of the 5 (five) years. Only one request for extension of time, with maximum of 2 (two) years for commencement or of fully exercising of water use licence will be considered.

Change of details of licensee or property

2.6 The licensee must inform the Head Provincial Operations: Mpumalanga of any change of ownership, name, address, premises and/or legal status within sixty (60) days of such change taking place.

2.7 If the properties in respect of this licence is/are subdivided or consolidated, the licensee must provide full details of any change(s) in respect of the properties to the Head Provincial Operations: Mpumalanga within sixty (60) days after the registration of title deed(s).

2.8 If the licensee is not the end user/beneficiary of the water user related infrastructure and will not be responsible for long term maintenance and management of the infrastructure, the licensee must provide a hand over report to the successor in title including a brief management/maintenance plan and the agreement for infrastructure along with allocation of responsibilities, within sixty (60) days after the date of change of end user or beneficiary.

Early renewal for the Licence

2.9 The licensee must, if needed, apply for early renewal of this licence in terms of the Act within one (1) year before the expiry date of a licence. The application must be submitted to the Head Provincial Operations: Mpumalanga.

Malfunctions, incidences, contingencies and pollution prevention

2.10 The licensee must service all vehicles and other machinery outside the extent of the watercourse/s.

2.11 Oils and other potential pollutants must be disposed of at a licensed site, with the necessary agreement from the owner of such a site.

2.12 The licensee must handle, transport, store and use any hazardous substances according to the relevant legislation or South African National Standards (SANS).

2.13 Accurate and up-to-date records must be kept of all system malfunctions resulting in non-compliance with the requirements of this licence. The records must be available for inspection by the Head Provincial Operations: Mpumalanga upon request. Such malfunctions must be tabulated under the following headings with a full explanation of all the contributory circumstances:

2.13.1 operating errors;

2.13.2 mechanical failures (including design, installation or maintenance);

2.13.3 environmental factors (e.g. flood);

2.13.4 loss of supply services (e.g. power failure); and

2.13.5 other causes.

2.14 Any incident that causes or may cause water pollution shall be reported to the Head Provincial Operations: Mpumalanga or the designated representative within 24 hours. Should the incident occur during a weekend or public holiday, the licensee must report the incident on the next official working day.

2.15 The licensee must, within 14 days, or a shorter period of time, as specified by the Head Provincial Operations: Mpumalanga, 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 Head Provincial Operations: Mpumalanga of measures to be taken to:

2.15.1 correct the impacts resulting from the incident;

2.15.2 prevent the incident from causing any further impacts; and

2.15.3 prevent a recurrence of a similar incident

2.16 All incidents must be recorded in an incident register.

Water Conservation and Water Demand Management (WC/WDM)

2.17 The licensee must establish and implement a continual process of raising awareness among itself, its workers and stakeholders with respect to water conservation and Water Demand Management initiatives.

2.18 The licensee shall use water efficiently to minimise total water intake, avoid usage of water where possible, implement best management and operating practices, and maximise the reuse /recycle of contaminated water.

2.19 The licensee must continually investigate new and emerging technologies and put into practice water efficient devices and /or apply technique for the efficient use of water, in an endeavour to conserve water at all times.

2.20 The licensee must develop and submit water conservation and water demand management (WC/WDM) plan to the Head Provincial Operations: Mpumalanga within one (1) year from the date of issuance of this licence. The WC/WDM Plan should:

2.20.1 quantify the water use efficiency of the activity;

2.20.2 contain the mine/industry water management and water loss strategies and programmes;

2.20.3 sets annual targets for improved water use efficiency for the mining/industrial activity, beneficiation and waste disposal practices and stipulates which measures will be implemented to achieve the targets on the mine;

2.21 The licensee must report annually on the implementation of WC/WDM plan including retrofitting with water efficient technologies and devices, reduction of total water demand, improvement in water use efficiency benchmarks and target.

2.22 The licensee must update the WC/WDM plan every five (5) years and submit to the Head Provincial Operations: Mpumalanga for approval.

2.23 The licensee must, where water is stored off-channel in a dam or reservoir ensure that all distribution and reticulation systems or pipelines are properly constructed, operated and maintained in good working order to prevent water losses through physical leakages, burst and reservoir overflows.

Storm water management

2.24 Storm water management facilities must be constructed, operated and maintained in a sustainable manner throughout the project as detailed in the Storm Water Management Plan.

2.25 Increased 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.

2.26 All storm water that would naturally run across the dirty areas shall be diverted via lined channels and drains designed to contain the 1:50 year flood.

2.27 The dirty 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.

2.28 Clean storm water must be diverted from waste facilities including waste rock dump, mine materials and must be managed in such a manner as to disperse runoff and to prevent the concentration of storm water flow.

Monitoring, Methods of analysis

2.29 Sample analysis must be conducted by a recognized analytical laboratory, accredited by the South African National Accreditation System (SANAS), or that participates in a recognised Proficiency Testing Scheme to analyze the relevant constituents in the wastewater.

2.30 The date and time of monitoring in respect of each sample taken shall be recorded together with the results of the analysis.

CD: WUAM

2.31 The licensee must adhere to the monitoring programmes submitted with the application.

Water measurement and Reporting

2.32 The licensee shall install appropriate water measuring devices to measure the amount of water abstracted prior use of water.

2.33 The licensee must install the flow metering devices to all water uses and readings must be taken on each flow meter on a monthly basis.

2.34 Flow measuring, recording and monitoring devices shall be maintained in a sound state of repair and calibrated/ verified by a suitable competent person as per device specification. This must include a programme of checking, calibration, and/ or replacement of measuring devices.

2.35 Calibration /verification certificates of the flow measuring, recording and integrating devices must be available for inspection by the Head Provincial Operations: Mpumalanga or the representative upon request.

Membership to a Water Users Association

2.36 If a water user association exists or is established in the area to manage the resource, it is compulsory for the Licensee to be a member of the water user association. The Licensee must adhere to the rules, regulations and water management stipulations of the water user association.

Restrictions on access to certain areas

2.37 Strict access procedures must be developed and followed in order to control access to the property. Access to the facility/ies must be limited to authorised persons and animals.

2.38 Notices prohibiting unauthorised persons from entering the 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.

Auditing and Reporting

2.39 The licensee must conduct annual internal audits on compliance with the conditions of this licence. The first audit must be conducted within ninety (90) calendar days from the date of commencement of water use entitlement. A report on internal audits must be submitted to the Head Provincial Operations: Mpumalanga within sixty (60) calendar days of the finalisation of the audits.

2.40 The licensee must appoint an independent external auditor to conduct biennial (every two (2) years) external audits on compliance with the conditions this licence. The first audit must be conducted and finalised within one (1) year after commencement of a water use. A report on

CD: WUAM

the audit must be submitted to the Head Provincial Operations: Mpumalanga within sixty (60) calendar days of the finalisation of each audit.

Security by applicant

2.41 The Licensee must ensure sufficient financial provision according to applicable legislation.

Compensative measures

2.42 The Licensee must prevent adverse effects on other water users. All complaints must be recorded in complaints register and be investigated by a suitable qualified person, accredited by an institution/ registration body, appointed by the licensee, and if investigations prove that the licensee has impaired the rights of other water users, the Licensee must implement appropriate compensative measures as determined by the Minister.

Closure and Post Closure Mine Water Management

2.43 The licensee must submit the final Rehabilitation plan aimed at water resource management as part of the final closure water management plan to the Head Provincial Operations: Mpumalanga within one (1) year of remaining life of the mine as part of IWWMP.

2.44 The licensee must apply for a post closure water use related activities five (5) years before commencing with closure to the Head Provincial Operations: Mpumalanga for written approval.

2.45 The licensee must participate in the development of a regional post-closure water management strategy, in accordance with a methodology and format to be approved by the Head Provincial Operations: Mpumalanga, in collaboration with all hydro-geological interconnected mines.

CD: WUAM

APPENDIX II

Section 21(a) of the Act – Taking water from a water resource

1. Taking water from a resource

1.1. This licence authorises the taking of a maximum quantity of six hundred and thirty one thousand cubic metres (631 000m m^3/annum) per annum from groundwater at the locations given in Table 3.

Table 3: Summary of water uses authorised

Water use Description	Purpose	Property	Volume (m^3/annum)	Pumping rate/ hour	Coordinates
Section 21(a): Taking of water from a resource					
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For potable in the mine	Winterveld 293 KT	6000m^3 per annum	50 m^3/hour	S24°43'34.086" E30°09'55.512"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°43'42.1248" E30°09'53.6112"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°43'28.578" E30°10'8.418"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°43'32.7648" E30°09'57.7152"
Abstraction of water from underground	For domestic supply (community	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'58.86" E30°09'41.80"

CD: WUAM

Water use Description	Purpose	Property	Volume (m^3/annum)	Pumping rate/ hour	Coordinates
through boreholes located on the farm Winterveld 293 KT	use).				
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'54.7452" E30°09'54.0792"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'47.52" E30°09'34.092"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'42.1128" E30°09'43.38"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'29.934" E30°09'44.3232"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'21.7332" E30°09'36.6588"
Abstraction of water from underground through boreholes	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'22.698" E30°09'17.478"

Water use Description	Purpose	Property	Volume (m^3/annum)	Pumping rate/ hour	Coordinates
located on the farm Winterveld 293 KT					
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'33.03" E30°9'4.77"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'42.7248" E30°4.5972"
Abstraction of water from underground through boreholes located on the farm Winterveld 293 KT	For domestic supply (community use).	Winterveld 293 KT	20000 m^3 per annum	50 m^3/hour	S24°42'52.506" E30°9'11.412"
Reuse of water removed from dewatering	For operational use.	Winterveld 293 KT	365 000m^3 per annum		S24°43'19.02" E30°09'34.65"

1.2 The water use related to water removed from underground and providing to Mahlakwena community shall not commence prior Memorandum of Agreement (MOA) between the licence holder and the Municipality is approved. The licence holder shall submit the signed MOA to the Department for further considerations.

2. Water measurement

2.1 All water taken from the resource shall be measured, recorded and reported as follows:

2.1.1 The daily quantity of water taken must be metered or gauged and the total recorded at the last day of each month; and

2.1.2 The water level measurements must be taken on a monthly basis and the date, time, and geographical location should be recorded.

CD: WUAM

2.1.3 The Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Head Provincial Operations: Mpumalanga on or before 25 January and 25 July of each.

3. Drinking Water Quality

3.1 The licensee must ensure that the drinking water quality supplied meets South African National Standards for Drinking Water: SANS 0241.

4. Site specific condition

4.1 A maximum volume of 631 000 m^3/a of groundwater is recommended to be abstracted as indicated in the table below.

Recommended abstraction boreholes, volumes and rates

Water use description	Purpose	Volume of water taken per annum (m^3/a)	Pumping rate per hour (L/hr)	Pumping cycle per day
Abstraction of groundwater through borehole BH1	Potable use at the mine	6000	3089	8
Abstraction of groundwater through boreholes BH2, BH3, BH4, BH5, BH6, BH7, BH8, BH9, BH10, BH11, BH12, BH13 and BH14	For domestic supply at the community	260 000	59 400	12
Removal and re-use of water found underground	For safe continuation of mining	365 000	N/A	N/A

4.2 The groundwater abstracted for human consumption must be treated to comply with South African Water Quality guideline for domestic use limits.

CD: WUAM

APPENDIX III

Section 21(c) water use: Impeding or diverting the flow of water in a watercourse/s

And

Section 21(i) water use: Altering the bed, banks, course or characteristics of a watercourse/s

1. Section 21(c and i) water use activities

1.1 This licence authorises the Section 21(c) or (i) water use activities as set out in Table 4 and in the water use licence application reports submitted to the Department or the Head Provincial Operations: Mpumalanga (refer condition 1.2):

Table 4: Water uses authorised

Water use description	Purpose	Property	Dimension (m)	Co-ordinates	
				Start	End
Crossing 1 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 1800 Height: 600	S24°42'19.3207" E30°09'01.0240"	S24°42'18.4839" E30°08'59.9399"
Crossing 2 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 1500 Height 1500	S24°42'05.6600" E30°08'55.4678"	S24°42'03.1673" E30°08'54.5170"
Crossing 3 of unnamed tributary of Tubatsane	As a result of the haul road between the proposed	Winterveld 293 KT	Width: 1500 Height 1200	S24°41'55.2582" E30°08'49.85	S24°41'54.7724" E30°08'48.6450"

CD: WUAM

Water use description	Purpose	Property	Dimension (m)	Co-ordinates	
				Start	End
River	South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2			06"	
Crossing 4 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 1500 Height: 900	S24°41'50.7891" E30°08'41.4953"	S24°41'49.8818" E30°08'40.8115"
Crossing 5 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 1500 Height: 1200	S24°41'48.3412" E30°08'38.7520"	S24°41'47.8951" E30°08'37.9835"
Crossing 6 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the	Winterveld 293 KT	Width: 1800 Height: 600	S24°41'47.0171" E30°08'36.3051"	S24°41'46.5696" E30°08'35.3945"

CD: WUAM

Water use description	Purpose	Property	Dimension (m)	Co-ordinates	
				Start	End
	ore to the processing plant on South 2				
Crossing 7 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 2100 Height: 1200	S24°41'30.2409" E30°08'18.0032"	S24°41'29.3930" E30°08'17.4410"
Crossing 8 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 1800 Height: 600	S24° 40'7.6346" E30°08'09.8746"	S24°40'56.8892" E30°08'08.5942"
Crossing 9 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 2400 Height 1800	S24° 40'4.6066" E30° 08' 4.8453"	S24°40'53.8398" E30°08'02.2819"

Water use description	Purpose	Property	Dimension (m)	Co-ordinates	
				Start	End
Crossing 10 of unnamed tributary of Tubatsane River	As a result of the haul road between the proposed South 3 open pit and South 2 shaft to transport the ore to the processing plant on South 2	Winterveld 293 KT	Width: 2400 Height: 1500	S24° 40' 7.7662" E30°07'43.8935"	S24°40'15.3407" E30°07'45.6075"
Locating pollution control dam within 100 m from watercourses	Locating pollution control dam within 100 m from watercourses	Winterveld 293 KT		S24°43'29.87" E30°09'54.47"	S24°43'29.87" E30°09'54.47"
Locating waste rock dump within 100 m from watercourses	Locating waste rock dump within 100 m from watercourses	Winterveld 293 KT		S24°43'15.14" E30°09'5459"	S24°43'15.14" E30°09'5459"

1.2 The licence holder must carry out and complete all the activities listed under condition 1.1 according to the following:

No	Report Title	Compiled by	Date of report
1	Public Participation Report: Proposed Opencast Operations and Water Uses on Farm Winterveld 293KT for Modikwa Platinum Mine in the Fetakgomo Tubatse Local Municipality in Limpopo Province	Segope Water and Environmental Services	February 2024
2	WULA Summary Report	Segope Water and Environmental Services	October 2024
3	Integrated Water and Waste Management Plant	Segope Water and Environmental Services	October 2024
4	Hydrological Impact Assessment Report for the Proposed South 3 Opencast Mining Activities at Modikwa Platinum Mine.	Segope Water and Environmental Services	June 2024

CD: WUAM

5	Wetland Assessment Report for the Proposed Opencast Mining Activities on the Farm Winterveld 293KT within Modikwa Platinum Mine	Segope Water and Environmental Services	May 2024
6	Environmental Impact Assessment and Environmental Management Programme for the Modikwa Platinum Mine South 3 Opencast Mining Project Water Use Licence and Environmental Authorisation Application on Farm Winterveld 293 KT situated with the Sekhukhune District Municipality, Limpopo Province.	Segope Water and Environmental Services	October 2024
7	Modikwa South 3 Opencast Pit Project SWMP Design Development Report in Support of WULA Application (Including Floodline Study)	Onno Fortuin Consulting (Pty) Ltd	November 2024
8	SWMP Signed Drawings	Onno Fortuin Consulting (Pty) Ltd	November 2024

1.3 No activity must take place within the extent of a watercourse/s, unless authorised by this licence.

1.4 No fundamental alterations of the work method statement, site plan/s and drawings are allowed, unless a modification is requested and granted by the responsible authority in writing; and

2. FURTHER REQUIREMENTS

2.1 For all the activities listed under condition 1.1, Table 4, "as-built" plans and engineering drawings prepared by a registered professional engineer, must be submitted to the responsible authority within three (3) months of completion of new activities of the date of issuing of this licence. These plans and drawings must indicate the watercourse/s including wetland boundaries and layout and structure location/s of all infrastructure impeding and/or diverting flow of water in the watercourse/s as well as alternations to watercourse/s on the property/ies.

3. Structures, Construction Plant and Materials

3.1 Structures must withstand a 1:100 year flood.

3.2 Structures must be non-erosive, structurally stable and must not induce any flooding or safety hazard.

3.3 Structures must be inspected for a minimum of once a quarter for accumulation of debris, blockage, erosion of abutments and overflow areas - debris must be removed and damages must be repaired and reinforced within a reasonable time.

4. Flow

4.1 The diversion activities must be conducted in a manner that does not negatively affect the yield of the water course where the activity will take place. The licensee must ensure that the

overall magnitude and frequency of flow in the watercourse/s does not decrease, other than for natural evaporative losses and authorised attenuation volumes.

4.2 Where flow in watercourse/s is permanent, the trench must be staged across part of the channel to maintain flows. Flows must not be stopped unless essential, if necessary to stop flows it must be for a minimal time only.

5. Riparian and Instream Habitat (Vegetation and Physical Structure)

5.1 Activities must start up-stream and proceed into a down-stream direction where feasible, so that the recovery processes can start immediately, without further disturbance from upstream works.

5.2 Operation and storage of equipment within the riparian habitat must only take place within the approved limits of disturbance indicated in the site plans and work method.

5.3 Activities must not occur in sensitive riffle habitats unless authorised by this licence.

5.4 Indigenous riparian vegetation, including dead trees, outside the limits of disturbance indicated in the site plans must not be removed from the area.

5.5 Alien and invader vegetation must not be allowed to further colonise the area, and all new alien vegetation recruitment must be sustainably eradicated or controlled.

5.6 Soils that have become compacted through the water use activities must be loosened to an appropriate depth to allow seed germination.

5.7 Stockpiling of removed soil and sand must be stored outside the extent of the watercourse/s, to prevent being washed into the watercourse/s and must be covered to prevent wind and rain erosion.

5.8 The use of machinery within the instream and riparian habitat will lead to compaction of soils and vegetation and must be restricted to demarcated areas only.

6. Biota

6.1 The licence holder must allow movement of aquatic species, including migratory species where applicable.

6.2 Ensure implementation of all mitigation measures not to disturb the breeding, nesting and/or feeding habitats and natural movement patterns of aquatic biota.

7. Rehabilitation and Management

7.1 The licensee must implement the rehabilitation programme to restore the watercourse/s to environmentally acceptable and sustainable conditions after completion of the activities as outlined in the rehabilitation plan.

7.2 The rehabilitation must be implemented according to the approved Rehabilitation Plan

7.3 A photographic record must be kept as follows and submitted with reports as set out in condition 9.

7.4 Dated photographs of all the sites to be impacted before construction commences.

7.5 Dated photographs of all the sites during construction on a monthly basis; and

7.6 Dated photographs of all the sites after completion of construction, seasonally.

7.7 All disturbed areas must be re-vegetated with indigenous plants in consultation with an indigenous plant expert, ensuring that during rehabilitation only indigenous shrubs, trees and grasses are used in restoring the biodiversity.

8. MONITORING AND REPORTING

8.1 The monitoring plan must be implemented, and reporting done to the Head Provincial Operations: Mpumalanga as stipulated under condition 10.2

8.2 Six (6) monthly monitoring reports must be submitted to the Head Provincial Operations: Mpumalanga for the duration of the construction phase and yearly thereafter or until otherwise agreed in writing with the Provincial Head/CEO.

8.3 The monitoring programme for undermining watercourses must include the following:

8.3.1 **Operational Phase**

8.3.1.1 The Licensee must ensure that ground around the undermining area is stable. Where there is subsidence around the mining site, the licensee must inform the Department within 24 hours, develop and submit a rehabilitation plan within three (3) months for approval to Head Provincial Operations: Mpumalanga.

8.3.1.2 If a perennial water course is to be undermined, the pre-mine survey of the potentially affected reach must be placed on record and compared to surveys during the life of the mine in the event of the underground mining activity operation and dewatering record a sign of distress.

8.4 At least two water quantity monitoring points, one upstream and one downstream of the affected length of the watercourse/s that is being undermined.

8.5 At least two water quality monitoring points, one upstream and one downstream of the affected length of the watercourse/s that is being undermined.

8.6 A bio-monitoring programme (SASS) must be implemented along the affected length of the watercourse/s and must include a habitat assessment. Guidance to bio monitoring.

8.7 Exact positions of monitoring points must be indicated on the master layout plan (including their co-ordinates).

9. Post-operational Phase

9.1 Upon completion of the undermining project, if survey results show that the watercourse/s to be stable, an application may be made to the Head Provincial Operations: Mpumalanga for written approval to continue monitoring at less frequent intervals.

9.2 The mine must include the watercourse/s in its routine environmental inspection program and is obligated to advise the Head Provincial Operations: Mpumalanga of any unusual deflections or observations.

10. Water Quality

10.1 In-stream water quality must be analysed on a two-weekly basis during construction otherwise monthly at monitoring points both upstream and downstream of the activities for the following variables until pre-construction water quality levels have been reached:

10.1.1 pH.

10.1.2 Electrical conductivity (mS/M).

10.1.3 Suspended solids (mg/l).

10.1.4 Turbidity.

10.1.5 Total dissolved solids (mg/l)

10.1.6 Nitrate / nitrites (as N) (mg/l)

10.1.7 Temparature; and

10.1.8 Disolved oxygen (mg/l).

10.1.9 Monitoring must be undertaken as set out in condition 10.1.

10.2 Activities must be scheduled to take place during the dry seasons when flows are lowest where reasonably possible.

10.3 The licensee must ensure that the quality of the water to downstream water users does not decrease because of the water use activities listed under condition 1.1.

11. Site specific condition

11.1 File, 1 Pages 11-12: Table-Summary of potential impacts and proposed mitigation measures. Mitigations measures to be implemented.

11.2 File 1, Tables 12-2,3,4: Potential impacts and mitigations measures. Mitigation measures to be implemented.

CD: WUAM

11.3 Scientific buffers to be adhered to. These imply hydropedology buffers at maximum 50m from the centre of the impacted streams. A 100m stream offset as per GN704.

11.4 All infrastructures and mining developments outside the 1:100-year floodline, unless authorised.

11.5 Clean water stormwater discharge must be equipped with energy dissipater and Reno mattress.

11.6 File 1, Table 16-1: Proposed surface water monitoring plan. Implement this monitoring plan.

11.7 Conduct a search and rescue operation for protected, rare/endangered and medicinal value plants. These plants must be established in a nursery and/or replanted in a suitable habitat to minimize plant stress, monitoring and support of these plants must be undertaken and documented.

11.8 Implement alien and invasive vegetation control management according to a Standard operating procedure in line with regulations on herbicides, pesticide and hazardous/toxic material use and disposal.

11.9 The rehabilitation plan for cleared areas must be according to as plant species plan developed by a Professionally registered landscape architect or ecologist.

11.10 Fuel storage areas must be bunded to 119% capacity of fuel and other hazardous materials stored and drain into a sump. No soil exposure in the bunded area is allowed.

11.11 File 2, Section 6, page 36: implement the conclusion and recommendations of a Wetland Assessment Report.

11.12 File 2, Section 8.1. implement the mitigation measures of the hydropedological assessment.

11.13 File 3, Figure 5-2: Provisional Mining Layout – Modikwa South 3 OP Showing 100m Stream buffers. Adhere to 100m stream buffers as shown.

11.14 File 3, Table 7-1: Ten x stream crossings – Showing floods and recommended culvert sies. Pipe culverts are not recommended as shown No.MW-D-06, revision 0 by Onno Fortuin Consulting. Only fully open box culverts are recommended as shown in drawings No. MW-08,09&10-0, revision by Onno Fortuin Consulting.

11.15 File 3, Tables 9-1&2: Dirty and clean water canals – Design attributes for a 1:50 year event. Side slopes of 1:3 and larger are recommended. Slopes of 1:2 as indicated are not recommended.

11.16 Clean water canals must be as natural as possible. Ensure indigenous vegetation establishment of the canal to prevent erosion.

CD: WUAM

11.17 File 3, Section 9.7: in-line Silt Trap. Implement this in-line silt trap and drawing No.MW-D-01, revision 0 by Onno Fortuin Consulting.

11.18 Implement freeboard level controls (0.8m minimum) that report to a control room at the return water dam.

11.19 Install outflow/overflow measurement device(s) that report to a control room at the return water dam.

11.20 File3, Section 9.9: Flood Berm along Pit Boundary. Implement the flood berm and drawing No.MW-D-12, revision 0 by Onno Fortuin Consulting. Side slopes of 1:3 and larger are recommended. Slopes of 1:2 as indicated are not recommended. Ensure indigenous vegetation establishment of the flood berm to prevent erosion.

11.21 File 4. Mention is made of a stream/river diversion but neither applied for nor substantiated by studies and drawings. Therefore, the proposed river diversion is not recommended. Localized impacts on the stream/river due to construction of box culverts for the 10 haul road crossings is allowed, as per approved submitted drawings, as long it not results in a stream/river diversion. File 7 confirms that the only relevant application is for 10 stream/river crossings.

11.22 File 5. Section 10.4 indicates no impact on streams/wetlands due to dewatering activities associated with the project. Continuous groundwater monitoring records must show this.

11.23 File 6. Section 9: conclusion and recommendations. The following is stated: "the excavations and pit diggings (Section 21 c and i water uses) for the purpose of mining must be allowed outside the floodplain wetland, but if they are within the floodplain buffer, this should be allowed under strict regulated conditions, such a condition of concurrent rehabilitation, erosion and sediments control" as this study indicates that no wetlands are present (see File 8-Section 4.1, page 29 "Wetland Delineation"), no excavations and pit diggings for the purpose of mining are not allowed outside the floodplain wetland and the floodplain buffer.

11.24 Due to the contradictions in the documents about the presence of wetlands and notably floodplain wetland, no activities shall be undertaken within 500 metres of the Steelpoort River until the (non) presence of such wetlands are indicated in an official, professional report by a suitable qualified PrSCiNat registered wetland specialist. The report must indicate protection and remediation measures of these wetlands as impacted by the new proposed mining activities, notably on dewatering, PES/EIS impacts and riparian vegetation stress. Obliviously any activity within 500m of a wetland shall be authorised before such activity may commence.

12. Exemptions in terms of GN704 exemptions

12.1 **Regulation 4(a):** *Locate or place any residue deposit, dam, reservoir, together with any associated structure or any other facility within the 1:100-year flood-line or within a horizontal distance of 100 m from any watercourse or estuary, borehole or well, excluding boreholes or wells drilled specifically to monitor the pollution of groundwater, or on water-logged ground, or on ground likely to become water-logged, undermined, unstable or cracked* of

the farm Winterveld 293KT for the following activities: for the pollution control dam, waste rock dump within 100 m from watercourses and across watercourses

12.2 **Regulation 4(b):** *Except in relation to a matter contemplated in regulation 10, carry on any underground or opencast mining, prospecting or any other operation or activity under or within the 1:50 year flood-line or within a horizontal distance of 100m from any watercourse or estuary, whichever is the greatest for* the opencast sections crossing the watercourse.

APPENDIX IV

Section 21(e) of the Act: Engaging in a controlled activity; Irrigation of any land with waste or water containing waste.

1. QUANTITY OF WATER CONTAINING WASTE FOR IRRIGATION

1.1 This licence authorises irrigation with maximum volume of two thousand six hundred cubic metres (2600m³/annum) per annum of treated effluent/ water containing waste as detailed in Table 5.

Table 5: Summary of authorised water uses

Water uses description	Purposes	Properties	Volume (m³/ annum)	Co-ordinates
Section 21 (e)				
Irrigation of lawns (grass) with treated effluent from the WWTP	Wastewater reuse for irrigation of lawns (grass) at the mine.	Winterveld 293KT	2 600m³ per annum	S24°42'51.87" E30°09'54.40"

1.2 The quantity of water containing waste authorised to be disposed on land through irrigation, in terms of this licence may not be exceeded.

1.3 The licensee must prevent at all occurrence of invasive alien vegetation on all areas irrigated with water containing waste authorised under this licence.

2. CROP TYPE AND AREA IRRIGATED

2.1 This licence authorises to irrigate a total surface area of 4.32 hectares (ha) of grass on mining area as set out in Table 5 and as per condition 1 in Appendix IV.

3. QUALITY OF WATER CONTAINING WASTE TO BE DISPOSED

3.1 The quality of the water containing waste irrigated may not exceed the limits as shown in Table 6:

Table 6: Quality of treated waste water used for irrigation

Variable	Limits
pH	5.5-9.5
Electrical Conductivity EC (mS/m)	200
Chemical Oxygen Demand (mg/l)	400
Suspended Solids (mg/l)	25
Ammonia (mg/l)	1.0
Nitrate/Nitrite (mg/l)	15
Orthophosphate (mg/l)	1
E. Coli (per 100ml)	400

4. MONITORING

4.1 Quantity

4.1.1 The quantity of water containing waste irrigated must be metered and recorded daily.

4.1.2 Monitoring for the quantity of the water containing waste for irrigation must be done at the point where the effluent is piped into the irrigation dam.

4.2 Quality

4.2.1 Monitoring points for quality must be at the outlet of the wastewater treatment works or at the point where the effluent is piped into the irrigation dam.

4.2.2 The samples taken at outlet point of the WWTWs or at the point where the effluent is piped into the irrigation dam must be analysed for the variables at the required frequencies:

4.3 Groundwater monitoring

4.3.1 Groundwater monitoring shall be undertaken as set out in condition 4 monitoring condition under S21(g). of Appendix V.

5. GENERAL IRRIGATION PRACTICES

5.1 Irrigation with wastewater must be practiced in a systematic manner and precautions shall be taken so as to prevent.

5.2 Water logging and pooling of waste in any location.

5.3 Pollution of underground water or surface water due to seepage or otherwise.

5.4 Fly breeding, public health hazard, odour or secondary pollution.

5.5 Runoff from the irrigation area because of wet weather or any other conditions whatsoever.

5.6 The site of the irrigation area shall be adequately fenced to prevent the entry of animals and unauthorised persons.

6. SITE SPECIFIC CONDITIONS

6.1 The groundwater model must be updated every 2 years during the life of mine to calibrate and validate its results and to inform effective water management and closure planning. This will improve the groundwater level recovery and time to decant calculations. The model must also be updated with new geochemical data available to update the contaminant transport model.

6.2 A mine decant action plan must be developed to address the post closure impacts associated with decant, seepage and baseflow salt loads.

APPENDIX V

Section 21(g) of the Act: Disposing of waste in a manner which may detrimentally impact on a water resource

1. DISPOSAL OF WASTE /WATER CONTAINING WASTE

1.1 The licensee is authorised to dispose of a maximum volume in cubic meters (m^3/a) per annum of water containing waste into the waste management facilities on the property described in Table 7.

Table 7: Water Uses Authorised

Water uses description	Purposes	Properties	Capacity/ Volume (m^3, tonnes per annum)	Co-ordinates
Waste rock dump and overburden materials	Disposal of waste rock generated as a result of the opencast	Winterveld 293 KT	9 755 719 m^3 per annum Capacity: 3 209 891	S24°43'15.14" E30°09'5459"
ROM stockpile	Stocking of ROM before it is transported to the processing plant	Winterveld 293 KT	1 529 109 m^3 per annum Capacity: 1 006 233	S24°42'45.73" E30°09'35.61"
Pollution Control Dam	Collection of dirty storm water and effluent from the mining area.	Winterveld 293KT	136 300 m^3 per annum Capacity: 50 000	S24°43'29.87" E30°09'54.47"
Dust suppression	Dust Suppression on the road	Winterveld 293KT	25 700 m^3 per annum Capacity: 3 ha	S24°43'54.34" E30°09'50.96"
Backfilling	Backfilling the pits with waste rock and overburden materials	Winterveld 293 KT	9 755 719 m^3 per annum Capacity: 157 8841	S24°43'25.00" E30°09'41.59" S24°43'02.69" E30°09'23.14" S24°42'35.69" E30°09'25.01"

2. CONSTRUCTION, OPERATION AND MAINTANANCE

2.1 The licensee shall carry out and complete all the activities listed in condition 1.1, including the construction and operation of the waste rock dump, ROM stockpile and pollution control dam according to the Report and according to the final plans as approved by the Head Provincial Operations: Mpumalanga.

2.2 The construction of the waste rock dump, ROM stockpile and pollution control dam 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.

CD: WUAM

2.3 Within 30 days after the completion of the activities referred in condition 1.1 the licensee shall in writing, under reference 27/2/2/B941/33/1, inform the Head Provincial Operations: Mpumalanga thereof. This shall 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.

2.4 The licensee must ensure that the disposal of the waste rock, wastewater and Rom stockpile and the operation and maintenance of the system are done according to the provisions in the Report.

2.5 The licensee shall submit a set of as-built drawings within ROM stockpile, waste rock dump and pollution control dam to the Head Provincial Operations: Mpumalanga after the completion of the ROM stockpile, waste rock dump and pollution control dam.

2.6 The pollution control dam shall be operated and maintained to have a minimum freeboard of 0.8 metres above full supply level and all other water systems related thereto shall be operated in such a manner that it is at all times capable of handling the 1:50 year flood-event on top of its mean operating level.

3. QUALITY OF WASTEWATER TO BE DISPOSED

3.1 The licensee shall monitor the quality of wastewater disposed of into a dirty water containment facility/ies as indicated in Table 8.

Table 8: Quality of water to be disposed into dirty water containment Facilities.

Variable	Pollution control dam
pH	8.34
Electrical conductivity	804
Sodium	54.1
Magnesium	47.1
Calcium	55.8
Chloride	53.6
Sulphate	45.5
Nitrate	7.6
Fluoride	<0.3

4. GROUNDWATER MONITORING

4.1 The licensee shall monitor groundwater resources to determine the impact of the activity on the water resource by taking samples at the monitoring points indicated in Table 9.

Table 9: Groundwater monitoring points

Sampling point name	Locality	X Co-ordinate	Y Co-ordinate
BH01	Winterveld 293 KT	S24°43'22.07"	E30°10'2.33"
BH02	Winterveld 293 KT	S24°43'43.75"	E30°10'6.02"
BH03	Winterveld 293 KT	S24°42'43.09"	E30°9'9.46"
BH04	Winterveld 293 KT	S24°43'22.88"	E30°10'11.82"

CD: WUAM

Sampling point name	Locality	X Co-ordinate	Y Co-ordinate
BH05	Winterveld 293 KT	S24°42'50.09"	E30°10'9.56"
BH07	Winterveld 293 KT	S24°42'57.64"	E30°10'10.94"
BH16	Winterveld 293 KT	S24°43'35.21"	E30°10'6.29"

4.2 Monitoring boreholes in the Table 10 in condition 4.1 in Appendix V must be clearly marked, numbered, and must be equipped with lockable caps. The Department reserves the right to sample monitoring boreholes at any time and to analyse these samples, or to have samples taken and analysed.

4.3 The licensee shall monitor groundwater and surface water resources to determine the impact of the facility and other activities on the water quality by taking samples at the monitoring points indicated in Table 10 and 11.

Table 10: Surface water quality monitoring

Sampling point name	Locality	X Co-ordinate	Y Co-ordinate
T-upstream	Winterveld 293 KT	24°42'32.39"S	30°09'05.83"E
T-downstream	Winterveld 293 KT	24°44'05.81:S	30°09'57.55"E

Table 11: Groundwater monitoring variables and frequency

Variables	Frequency	Baseline groundwater quality
pH	Quarterly	8.3
Electrical Conductivity (mS/m)	Quarterly	178
Sodium (mg/1)	Quarterly	9
Magnesium (mg/1)	Quarterly	8.2
Calcium (mg/1)	Quarterly	15
Chloride (mg/1)	Quarterly	7.9
Sulphate (mg/1)	Quarterly	4.4
Nitrate (mg/1)	Quarterly	<0.2
Fluoride (mg/1)	Quarterly	<0.3

4.4 The quality of the groundwater resource must be monitored by taking samples quarterly at groundwater monitoring points as described in condition 4.3 in Appendix V Each sample shall be analysed for the variables and at frequencies, as shown in Table 9: in Appendix V and/ or any other variable as may be required from time to time by the Head Provincial Operations: Mpumalanga.

4.5 Should pollution occur or possible pollution occur, the licensee must conduct the necessary investigations to determine the impact on groundwater associated with the waste rock dump, ROM Stockpile and pollution control dam and any mitigating actions that could be required. This must be done in consultation with the Head Provincial Operations: Mpumalanga and at time frames set by the Head Provincial Operations: Mpumalanga.

5. REPORTING

5.1 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.

CD: WUAM

5.2 The licensee shall submit the results of analysis for the monitoring requirements to the Head Provincial Operations: Mpumalanga on a quarterly basis under 27/2/2/B941/33/1.

6. INTEGRATED WATER AND WASTE MANAGEMENT

6.1 The Integrated Water and Waste Management Plan (IWWMP) and Rehabilitation Strategy and Implementation Plan (RSIP) must be updated annually and submitted to the Head Provincial Operations: Mpumalanga for approval.

6.2 The licensee must, at least 180 days prior to the intended closure of any facility, or any portion thereof, notify the Head Provincial Operations: Mpumalanga of such intention and submit any final amendments to the IWWMP and RSIP for approval.

7. Site specific condition on Geohydrological

7.1 The exemption against GN 704 regulation 4c is granted. Only mixed waste rock and overburden materials as determined to have low concentrations of leachable constituents and non-acid generating classification must be used. However, during backfilling of the pit, these materials should be placed at the bottom deeper parts of the opencast pit.

7.2 The backfilled areas should be regularly surveyed to ensure that free flow of surface water occurs. The final layer just below the topsoil cover of the pits should be clayey as possible to reduce excess recharge to the pits.

7.3 All dirty water containment facilities and waste facilities must be assessed on a regular basis to ensure that the lining is still adequate to prevent potential contamination of groundwater.

7.4 The groundwater model must be updated every 2 years during the life of mine to calibrate and validate its results and to inform effective water management and closure planning. This will improve the groundwater level recovery and time to decant calculations. The model must also be updated with new geochemical data available to update the contaminant transport model.

7.5 A mine decant action plan must be developed to address the post closure impacts associated with decant, seepage and baseflow salt loads.

7.6 The mined-out pits must be rehabilitated concurrently, and no open voids must be used as a wastewater storage facility. Wastewater accumulating in the pits must be pumped into the wastewater management facilities designed for that purpose.

7.7 The groundwater monitoring plan must be updated to include proposed pollution source monitoring boreholes for monitoring of the potential seepage quality emanating from the Mine Residue Facilities. The updated monitoring plan must be submitted to the Department within three (3) months of the issuance of a water use licence for approval.

CD: WUAM

7.8 A post closure groundwater management plan which must contain the final decant management plan and post closure groundwater monitoring network that indicates boreholes to be drilled into the backfilled pit to monitor groundwater recovery, groundwater quality and plume migration must form part of the mine closure plan which will be submitted to the department.

7.9 Before the start of operations, a plan that includes explicit consideration of closure and rehabilitation issues must be prepared. These plans should define the sequence and nature of operations and detail the methods to be used in closure and restoration. The plans must be updated regularly (every 2 years) during operations with available monitoring data. All operational planning and activities should be undertaken with eventual closure in mind, such that operations can end in a manner that minimizes the final risks and liabilities in the post-closure phase

8. Exemptions in terms of GN704 exemptions

8.1 **Regulation 4(c):** *place or dispose of any residue or substance which causes or likely to cause pollution of a water resource, in the workings of any underground or opencast mine excavation, prospecting diggings, pit or any other excavation* on Winterveld 293KT for backfilling of the opencast with overburden materials and waste rock.

8.2 **Regulation 5:** *No person in control of a mine or activity may use any residue or substance which causes or is likely to cause pollution of a water resource for the construction of any dam or other impoundment or any embankment, road or railway, or for any other purpose which is likely to cause pollution of a water resource* for construction of the starter walls of the tailings dam, pollution control dam and road maintenance.

9. Site specific condition on Civil Engineering

9.1 Limitations: This recommendation does not exempt the designer from complying with any other legislation. This review refers only to the activity as specified and described in the signed design report and drawings listed under documentation submitted for consideration.

9.2 Notices of commencement: One month's written notice must be given to the DWS before commencement of construction activities. Such notice shall make clear reference to the site location details and the reference number of the project as indicated on the license and include a high-level project programme to facilitate optional attendance of the preconstruction meeting (specified in SANS 10409 (2020)) by the Regulator and an inspection of the site during construction. One month's written notice must also be given to the Department of Water and Sanitation before commencement of the operational phase activities.

9.3 Deviation from accepted design: The licensee must notify the Department of Water and Sanitation in writing, within 24 (twenty-four) hours if any condition of this design and its acceptance cannot be, adhered to during construction or is not adhered to during operation. The notification must be supplemented with reasons for non-compliance, and proposed rectification measures.

CD: WUAM

9.4 Overtopping of pollution control dams (PCDs), Return Water Dam (RWDs) or similar containment facilities: The discharge of leachate or polluted water from any pollution control dam (or similar non-compliant containment) is to be reported as an incident within 24 hours, and treated as such, with appropriate remediation. Similarly, pollutant discharges from sumps, manholes or pipeline routes shall be reported and treated as an incident.

9.5 The licensee shall employ a third-party controller (as defined in SANS 10409: 2020), also known as an independent CQA person, who is responsible for ensuring that the procedures of document management on site are followed and that independent laboratory tests are undertaken, and the results reflect compliance with SANS 1526 (2015) for HDPE geomembranes on the liner and SANS 10409:2020 for the installation along with other quality assurance records. The CQA person shall keep records of the certified welding technicians (CWTs) certification.

9.6 The licensee shall continuously monitor the pollution-controlled dams, return water dams or similar infrastructure for any leakages, water quantity and qualities, the results are to be made available to the department upon request.

9.7 The licensee shall ensure the independence of the Engineer, Contractor, Subcontractors, Material suppliers, and CQA agent in the development and implementation of the construction quality assurance.

9.8 The licensee shall ensure that the stormwater management facilities, pollution control dams, return water dams and Stormwater-channels are kept in a well-maintained state such that at any given point in time they are able to handle the 1:50 year flood events and dewatering inflows without spilling.

9.9 Repairs to damages: The licensee shall ensure that all the facilities are kept in a safe operating condition and should ensure timeous repair to the facilities should they suffer any damages.

9.10 Demarcation, cordons, barriers, and warning systems: The facility manager must place cordons, barriers and warning systems around facilities to define the nature and extent of each disposal or waste management area and avoid intersection of different waste Types as per the NEMWA Regulations 2013, with particular attention to health and safety of persons.

9.11 The authorities shall not be held responsible for any damages or losses suffered by the licensee or its successor in title in any instance where construction or operation after construction is temporarily or permanently stopped for reasons of non-compliance by the license holder with the conditions of approval as set out in this document or any other subsequent document emanating from these conditions of acceptance.

9.12 Monitoring: Comprehensive records of liquid movement with time from underdrainage system sumps/ manhole and leachate collection sumps shall be maintained and reported to the authorities quarterly or upon request.

9.13 The authorities shall not be held responsible for any damages or losses suffered by the licensee or its successor in title in any instance where construction or operation after construction is temporarily or permanently stopped for reasons of non-compliance by the license holder with the conditions of approval as set out in this document or any other subsequent document emanating from these conditions of acceptance.

CD: WUAM

9.14 Close out reports must be given to DWS detailing but not limited to the following: construction methods followed, tests for quality assurance undertaken, as built drawings including map showing as built footprint of the infrastructure, compliance with SANS standards. The supporting evidence shall include the number of tests, minimum, maximum, mean value, and standard deviation for each test method undertaken on all materials used in the barrier system design and construction which include compacted clay, geotextiles, geomembranes, drainage material, and soil cement or ash-Crete or similar protection/ballast materials.

APPENDIX VI

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. Removing water found underground

1.1 The licensee is authorised to remove the maximum volume of three hundred sixty-five thousand cubic metres (365 000m³/annum) per annum water found underground as indicated in Table 12.

Table 12: Quantity of water to be removed.

Water use description	Purposes	Properties	Volume (m³/ annum)	Co-ordinates
Section 21(j)				
Removal and re-use of water found underground	Dewatering from open cast and reuse of water removed from open cast for operational use.	Winterveld 293KT	365 000m³ per annum	S24°43'19.02" E30°09'34.65"

1.2 The quantity of water removed from underground must be metered and recorded on a daily basis.

1.3 The groundwater levels shall be monitored every six months (once in the beginning of the dry season and once in the beginning of the wet season).

1.4 Self-registering flow meters must be installed in the delivery lines at easily accessible positions near the dewatering points.

1.5 The licensee shall follow acceptable construction, maintenance and operational practices to ensure the consistent, effective and safe performance of the underground water removal system.

1.6 Reasonable measures must be taken to provide for mechanical, electrical or operational failures and malfunctions of the underground water removal system.

2. Site specific condition

2.1 Mining must progress as swiftly as possible to reduce the period of active dewatering. In addition, the extent of the mining areas should be kept to a minimum to reduce dewatering impacts. The dewatering of the open pits should stop as soon as mining activities cease.

2.2 The dewatering volumes must be monitored frequently throughout the LoM to note deviations from the predicted inflows as soon as they are identified.

CD: WUAM

END OF LICENCE