



## **water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

Private Bag X5, MMABATHO, 2735, Cnr Dr James Moroka Drive and Sekame Road, Unit 99, MegaCity Shopping Centre, Tel: 012 392 1309, Fax: 018 384 0913

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

I, **Chadwick Lobakeng** in my capacity as Provincial Head: North West Operations, acting under authority of the powers delegated to me by the Acting Director General of the Department of Water and Sanitation, hereby authorises the following water uses in respect of this licence.

SIGNED: 

DATE: 27/09/2022

**LICENCE NO: 07/A21K/A/12337**

**FILE NO: 27/2/2/A1021/15/1**

**REF. NO: WU21273**

**Licensee: Sylvania Metals (Pty) Ltd : Turffontein Borehole Abstraction**

**Postal Address: PO BOX 976**

**Florida Hills**

**1716**

**B 11910**

**1. Water Uses authorised by this licence****Table 1: Summary of water uses authorised**

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.
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**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 Number	Deed
Section 21(a)	Farm Turffontein 462 JQ	Portion 3	National Government of the Republic	T11677/2007	

**3. Licence and Review Period**

3.1 This licence is valid for a period of twenty (20) years 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)
Authorized Area	The area authorized for the undertaking of afforestation as described in this licence (point 7 & table 5) and depicted in appendix III.
Buffer zone	Buffer zone: a strip of land surrounding a wetland or riparian area in which activities are controlled or restricted, in order to reduce the impact of adjacent land uses on the wetland or riparian area. The buffer zone is measured from the edge of the delineated watercourse determined according to the Departmental guideline - "A practical field procedure for identification and delineation of wetlands and riparian areas."
Department	The Department of Water and Sanitation
CEO	The Chief Executive Officer of Catchment Management Agency Insert the name of the Agency and Address.
CMA	Catchment Management Agency
Stream flow reduction activity section 36 (1)	The following are stream flow reduction activities:

	<p>(a) the use of land for afforestation which has been or is being established for commercial purposes; and</p> <p>(b) an activity which has been declared as such under section 32(2) of the Act.</p>
Regional Head	Head of Provincial Operations insert name of Provincial Operation and Address
Responsible Authority	<p>"Responsible authority" in relation to a specific power or duty in respect of water uses, means</p> <p>(a) if that power or duty has been assigned by the Minister to a catchment management agency, that catchment management agency; or</p> <p>(b) if that power or duty has not been so assigned, the Minister</p>
Delegated Authority	The person that has been delegated certain functions of the Act
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.
Watercourse	<p>"Watercourse" means</p> <p>(a) a river or spring;</p> <p>(b) a natural channel in which water flows regularly or intermittently;</p> <p>(c) a wetland, lake or dam into which, or from which, water flows; and</p> <p>(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.</p>
Pollution	<p>"Pollution" means the direct or indirect alteration of the physical, chemical or biological properties of a water resource so as to make it -</p> <p>(a) less fit for any beneficial purpose for which it may reasonably be expected to be used; or</p> <p>(b) harmful or potentially harmful -</p> <p>(aa) to the welfare, health or safety of human beings;</p> <p>(bb) to any aquatic or non-aquatic organisms;</p> <p>(cc) to the resource quality; or</p> <p>(dd) to property.</p>
Days	Calendar days
Commencement date	The date on which water use starts
Act	means the National Water Act, 1998 (Act 36 of 1998) as amended.
Minister	means the Minister of the Department of Water and Sanitation.

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Sensitive riffle habitats	is 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.
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)

Sylvania Metals (Pty) Ltd (Sylvania) is operating a Chrome Tailings Retreatment Plant (CTRP) to recover Platinum Group Metals (PGMs) on a portion of the existing Samancor Chrome Ltd Lesedi Section (sharing premises with TC Smelters). The tailings from the Sylvania CTRP is currently being returned back onto the existing Tailings Storage Facility (TSF) (known as TSF5) at the Samancor Lesedi Section, which has a limited lifespan, and therefore the need arose to build an independent TSF (henceforth to be known as TSF6). Sylvania Metals (Pty) Ltd (Sylvania) intends to use groundwater in the Chrome Tailings Retreatment Plant (CTRP) to recover Platinum Group Metals (PGMs). The borehole will be located on Portion 3 of the Farm Turffontein 462 JQ. The existing Chrome Tailings Retreatment Plant (CTRP) is located within the A21K quaternary catchment, which falls in Limpopo Water Management Area (WMA).

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## 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 must obtain any proprietary rights or servitudes at his / her own cost for lawful access to a property not owned by the Licensee
- 1.5 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.
- 1.6 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.
- 1.7 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 Provincial Head/ CEO.
- 1.8 If the water use entitlement is not fully utilised within the 5 (five) year period referred to in condition 2.4 in Appendix I, the licence may be amended to reflect the extent of the water use that is being utilised, or the licence may be cancelled.
- 1.9 A request for extension of time to fully utilise an entitlement to use water must be submitted to the Provincial Head/ CEO, at least three months, before the expiry of the 5 (five) years referred to in condition 2.4 in Appendix I. An extension may only be made after the Delegated Authority has considered all relevant factors.
- 1.10 Only one request for extension of time for commencement or of fully exercising of water use licence will be considered.
- 1.11 The maximum period for extension of time that may be granted to fully utilise the water entitlement is a maximum of 2 (two) years after the initial 5 (five) year period referred to in condition 2.4 in Appendix I.

##### Change of property details

- 1.12 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**

- 1.13 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**

- 1.14 The quantity of water authorised to be taken in this licence may not be exceeded.  
1.15 The quality of water authorised to be disposed and discharged in this licence may not be exceeded.  
1.16 Any changes to the monitoring programmes should be approved by the Provincial Head/CEO.

### **Reviewal of licences**

- 1.17 The volume authorised in this licence may be reduced when the licence is reviewed.  
1.18 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**

- 1.19 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**

- 1.20 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.  
1.21 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**

- 1.22 The licensee is not indemnified from any detrimental effect that the dam(s) may have on other properties.  
1.23 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.  
1.24 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.

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### Restrictions

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

### Water measurement and reporting

- 1.26 The Provincial Head/ CEO 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.

### Stormwater Management

- 1.27 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

- 1.28 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 Provincial Head/ CEO.

### Appeals

- 1.29 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.

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### **Commencement of water use licence.**

- 2.3 The licensee must inform the Provincial Head/ CEO in writing within seven (07) days after the licensee commences with water use entitlement and again within thirty (30) days upon completion of the activity/ies.
- 2.4 The water uses authorised in this licence must be fully utilised within five (5) years from the date of issuance of this licence.
- 2.5 If the licensee cannot fully utilise the water use entitlement within 5 (five) years, the licensee may request from the Provincial Head/ CEO, with reasons, an extension of time to fully utilise the said water use entitlement.
- 2.6 If the above (condition 2.5) is not adhered to, the water use entitlement may be cancelled or amended accordingly.

### **Change of details of licensee or property**

- 2.7 The licensee must inform the Provincial Head/ CEO of any change of ownership, name, address, premises and/or legal status within sixty (60) days of such change taking place.
- 2.8 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 Provincial Head/ CEO within sixty (60) days after the registration of title deed(s).
- 2.9 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**

- 2.10 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 Provincial Head/ CEO.

### **Malfunctions, incidences, contingencies and pollution prevention**

- 2.11 The licensee must service all vehicles and other machinery outside the extent of the watercourse/s.
- 2.12 Oils and other potential pollutants must be disposed of at a licensed site, with the necessary agreement from the owner of such a site.
- 2.13 The licensee must handle, transport, store and use any hazardous substances according to the relevant legislation or South African National Standards (SANS).
- 2.14 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 Provincial Head/ CEO upon request. Such malfunctions must be tabulated under the following headings with a full explanation of all the contributory circumstances:
  - 2.14.1 operating errors;
  - 2.14.2 mechanical failures (including design, installation or maintenance);
  - 2.14.3 environmental factors (e.g. flood);

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- 2.14.4 loss of supply services (e.g. power failure); and
- 2.14.5 other causes.
- 2.15 Any incident that causes or may cause water pollution shall be reported to the Provincial Head/ CEO 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.
- 2.16 The licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head/ CEO, 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/ CEO of measures to be taken to:
  - 2.16.1 correct the impacts resulting from the incident;
  - 2.16.2 prevent the incident from causing any further impacts; and
  - 2.16.3 prevent a recurrence of a similar incident
- 2.17 All incidents must be recorded in an incident register.

### **Water Conservation and Water Demand Management (WC/WDM)**

- 2.18 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.
- 2.19 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.
- 2.20 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.
- 2.21 The licensee must develop and submit water conservation and water demand management (WC/WDM) plan to the Provincial Head/ CEO within one year (1) from the date of issuance of this licence. The WC/WDM Plan should:
  - 2.22 quantify the water use efficiency of the activity;
    - 2.22.1 contain the mine/industry water management and water loss strategies and programmes;
    - 2.22.2 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;
- 2.23 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.
- 2.24 The licensee must update the WC/WDM plan every five (5) years and submit to the Provincial Head/ CEO for approval.
- 2.25 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.

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### **Storm water management**

- 2.26 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.
- 2.27 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.
- 2.28 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.
- 2.29 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.
- 2.30 Clean storm water must be diverted from Plant area 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**

- 2.31 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.
- 2.32 The date and time of monitoring in respect of each sample taken shall be recorded together with the results of the analysis.
- 2.33 The licensee must adhere to the monitoring programmes submitted with the application.

### **Water measurement and Reporting**

- 2.34 The licensee shall install appropriate water measuring devices to measure the amount of water abstracted prior use of water.
- 2.35 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.
- 2.36 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.
- 2.37 Calibration /verification certificates of the flow measuring, recording and integrating devices must be available for inspection by the Provincial Head/ CEO or the representative upon request.
- 2.38 A total of at least four groundwater monitoring wells (one in each direction) should be installed around the abstraction borehole. These well should be sited with geophysical equipment to possibly target secondary aquifer structures.
- 2.39 The groundwater monitoring points should be continuously monitored (via automated level loggers) to assess if the drawdown of the abstraction well is significantly lowering the groundwater table.
- 2.40 The discharge borehole should be monitored continuously.
- 2.41 A groundwater flow model should be updated every two years to assess possible impacts and changes in onsite conditions

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- 2.42 The abstraction volume of 250 000m<sup>3</sup> /annum is recommended as per geohydrological, and aquifer pump testing recommendation can be safely abstracted for a period not exceeding 12 hours for each boreholes per day.
- 2.43 Groundwater Management Plan must be developed, it must include Groundwater Monitoring Program and it must be submitted to the Provincial Head.
- 2.44 Groundwater monitoring boreholes must be strategically drilled for effective monitoring of groundwater.
- 2.45 Groundwater Level monitoring must be included, groundwater monitoring to be conducted on a quarterly basis, using an approved water level meter tool.
- 2.46 Groundwater level monitoring must be conducted monthly as the risk to groundwater level and stability is moderate to high. Groundwater level monitoring must be conducted by an approved geohydrologist or hydrologist or related field using an approved water quality monitoring technique.
- 2.47 Groundwater abstraction must be conducted by installing of water meter reading. Readings must be recorded on a monthly basis and compiled and submitted along with monitoring report annually.
- 2.48 All the above must be compiled into a groundwater monitoring report annually
- 2.49 In the event where the naming of boreholes changes the Department must be informed.

#### **Membership to a Water Users Association**

- 2.50 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**

- 2.51 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.
- 2.52 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**

- 2.53 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 Provincial Head/ CEO within sixty (60) calendar days of the finalisation of the audits.
- 2.54 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) after commencement of a water use. A report on the audit must be submitted to the Provincial Head/ CEO within sixty (60) calendar days of the finalisation of each audit.

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### Security by applicant

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

### Compensative measures

- 2.56 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 a institution/ Registration Body 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 Provincial Head/ CEO. Check discussions and irrigation template.



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**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 Two Hundred and Fifty Thousand cubic metres (250 000m<sup>3</sup>) per annum from groundwater at the locations given in Table 3

**Table 3: Summary of water uses authorised**

Water use(s) activities	Purpose	Capacity/ Volume (m <sup>3</sup> , tonnes and/or m <sup>3</sup> /annum)/ dimension	Property Description	Co-ordinates
Section 21(a)				
Abstraction of groundwater through Borehole (Syl BH03)	Industrial use	250 000m <sup>3</sup> /a	Portion 3 of the Farm Turffontein 462 JQ	25° 42' 39.05" S; 27° 36' 13.68" E

**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;
- 2.1.3 The Licensee shall keep record of all water taken and a copy of the records shall be forwarded to the Provincial Head/ CEO on or before 25 January and 25 July of each.

**END OF LICENCE**