



**water & sanitation**

Department:  
Water and Sanitation  
REPUBLIC OF SOUTH AFRICA

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

I, **Margaret-Ann Diedricks**, in my capacity as Director-General in the Department of Water and Sanitation and acting under authority of the powers delegated to me by the Minister of Water and Sanitation, hereby authorise the following water uses in respect of this licence:

SIGNED: .....

DATE: ..... 19<sup>th</sup> APRIL 2015 .....

**LICENCE NO: 10/D41K/AGJ/1735  
FILE NO: 27/2/2/D1141/C/1**

**1. Licensee:** Tshipi e Ntle Manganese Mining (Pty) Ltd  
**Postal Address:** P.O Box 652286  
Johannesburg  
2010

**2. Water Uses**

- 2.1 Section 21(a) of the Act: Taking of water from a water resource, subject to the conditions set out in Appendices I and II.
- 2.2 Section 21(b) of the Act: Storage of water, subject to the conditions set out in Appendices I and III.
- 2.4 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 IV.
- 2.6 Section 21(j) of the Act: Removing, discharging or disposing of water found underground, subject to the conditions set out in Appendices I and V.

**B 04959**



### 3. Properties on which water uses will be exercised

**Table 1: Water uses and properties**

Water Uses	Properties	Registered Owner
Section 21 (a)	Mamathwan 331 RD Portion 16 and 17	Tshipi e Ntle Manganese Mining (Pty) Ltd
Section 21 (b)	Mamathwan 331 RD Portion 17	Tshipi e Ntle Manganese Mining (Pty) Ltd
Section 21 (g)	Mamathwan 331 RD Portion 16 and 17	Tshipi e Ntle Manganese Mining (Pty) Ltd
Section 21 (j)	Mamathwan 331 RD Portion 17	Tshipi e Ntle Manganese Mining (Pty) Ltd

### 4. Registered Owner of the Properties

4.1 Tshipi e Ntle Manganese Mining (Pty) Ltd

### 5. Licence and Review Period

5.1 This licence is valid for a period of twenty six (26) years from the date of issuance and may be reviewed every five (5) years.

### 6. Definitions

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

"The Provincial Head" means the Provincial Head: Northern Cape, Department of Water and Sanitation, Private Bag X6101, Kimberley, 8300.

"The Act" means the National Water Act, (Act 36 of 1998).

"Report" refers to the reports entitled:

- Geo-hydrological Report prepared by Water Geoscience Consulting, dated 27 February 2009;
- Water Quality Management Report and Waste Management Plan prepared by SLP Global Environmental Solutions, dated 12 June 2013;
- Civil Design for the Storm Water Dam prepared by CICON Consulting Engineering, dated 21 October 2011;
- Environmental Management Plan prepared by Metago Environmental Engineers (Pty) Ltd, dated 20 May 2009;
- Environmental Impact Assessment prepared by Metago Environmental Engineering (Pty) Ltd, dated 23 May 2009;
- Integrated Water and Waste Management Plan (IWWMP) prepared by SLP Global Environmental Solutions, dated 12 June 2013; as well as all other related documentation and communication (e-mails, letters, verbal, etc) related thereto.



**7. Description of the Project**

Tshipi e Ntle Manganese Mining (Pty) Ltd is authorised to undertake Section 21(a), (b), (g) and (j) water uses in terms of Section 40 of the National Water Act, 1998 (Act 36 of 1998) associated with the mining of manganese ore on Portion 2 of the Farm Mamatwan 331 and Portion 3 (a Portion of Portion 1) of the Farm Diabiaghomo 226). The mine and associated activities are located in the Lower Vaal Water Management Area within Quaternary Catchment D41K.



## APPENDIX I

### General conditions of the licence

1. This licence is subject to all applicable provisions of the National Water Act, 1998 (Act 36 of 1998).
2. The responsibility for complying with the provisions of the licence is vested in the Licensee and not any other person or body.
3. The Licensee must immediately inform the Provincial Head of any change of name, address, premises and/or legal status.
4. If the property(ies) in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Provincial Head of the Department within sixty (60) days of the said change taking place.
5. If a water user association is established in the area to manage the resource, membership of the Licensee to this association is compulsory.
6. The Licensee shall be responsible for any water use charges or levies imposed by a Responsible Authority.
7. While effect must be given to the Reserve as determined in terms of the Act, where a desktop determination of the Reserve has been used in issuance of a licence, when a comprehensive determination of the Reserve has finally been made; it shall be given effect to.
8. The licence shall not be construed as exempting the Licensee from compliance with the provisions any other applicable Act, Ordinance, Regulation or By-law.
9. The licence and amendment of this licence are also subject to all the applicable procedural requirements and other applicable provisions of the Act, as amended from time to time.
10. The Licensee shall conduct an annual internal audit on compliance with the conditions of licence. A report on the audit shall be submitted to the Provincial Head within one (1) month of finalisation of the audit
11. The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within three (3) months after the date this licence is issued and a report on the audit shall be submitted to the Provincial Head within one (1) month of finalization of the report.
12. Flow metering, recording and integrating devices shall be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than two (2) years. Calibration certificates shall be available for inspection by the Provincial Head or his/her representative upon request.

13. Any incident that causes or may cause water pollution must be reported to the Provincial Head or his/her designated representative within twenty four (24) hours.
14. The Licensee must provide written proof from an independent laboratory that the stockpile material and waste rock dump material emanating from this project are Type 4 waste according to Regulation 36784 Articles 634 & 635.



## APPENDIX II

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

1. The Licensee is authorised to take a maximum quantity of water in cubic metres per annum ( $m^3/a$ ) from two (2) boreholes and a mining pit as indicated in Table 2.

**Table 2: Section 21 (a) water use activity**

Purpose	Volume ( $m^3/a$ )	Property Description	Co-ordinates
Taking water from an open (dewatering) pit for mining purposes	57 720 $m^3/a$	Mamathwan 331 RD Portion 17	27°22'47.4"S 22°57'55.0"E
Taking water from the borehole (TSH01) for mine processing	12 612 $m^3/a$	Mamathwan 331 RD Portion 16	27°22'52.2"S 22°56'58.8"E
Taking water from the borehole (TSHI02) for potable and emergency water use	12 612 $m^3/a$	Mamathwan 331 RD Portion 16	27°22'36.7"S 22°57'20.3"E

2. The quantity of water authorised to be taken in terms of this licence may not be exceeded without prior authorisation by the Department.
3. 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.
4. The above mentioned volume may be reduced when the licence is reviewed.
5. The Licensee shall continually investigate new and emerging technologies and put into practice water efficient devices or apply technique for the efficient use of water containing waste, in an endeavour to conserve water at all times.
6. The Licensee shall be responsible for any water use charges or levies, which may be imposed from time to time by the Department or responsible authority in terms of Department's Raw Water Pricing Strategy.
7. The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of:
  - 7.1 shortage of water
  - 7.2 inundations or flood
  - 7.3 siltation of the resource; and
  - 7.4 required reserve releases.
8. The Licensee shall establish and implement a continual process of raising awareness amongst itself, its workers and stakeholders with respect to Water Conservation and Water Demand Management initiatives.



## APPENDIX III

### Section 21 (b) of the Act: Storing of water

#### 1. Storing of Water

- 1.1 The Licensee is authorised to store a maximum quantity of treated water in cubic metres per annum ( $m^3/a$ ) in a reservoir as indicated in Table 3.

**Table 3: Section 21 (b) water use activity**

Purpose	Capacity/ Volume ( $m^3$ , tonnes and/or $m^3/annum$ )	Property Description	Co-ordinates
Storing potable water from Sedibeng Water Board in a water tank for domestic use	2000 $m^3$	Mamathwan 331 RD Portion 17	27°23'37.0"S 22°58'01.3"E
Storing water in a temporary dam for construction activities	9000 $m^3$	Mamathwan 331 RD Portion 17	27°23'31.6"S 22°58'03.1"E

- 1.2 The Licensee must obtain any proprietary rights or servitudes at their own cost.
- 1.3 The Licensee is not exempted from compliance with any applicable Dam Safety Regulations.

#### 2. Monitoring Requirements

- 2.1 The Licensee is not indemnified from any detrimental effect that the dam(s) may have on other properties. The Department does not accept any responsibility or liability for any damages or losses that may be suffered by any other party as a result of the construction and utilisation of the dams.
- 2.2. Suitable measuring structures must be constructed up-stream and down-stream of the dam to measure the flow entering and leaving the dam and this information must be available on request.
- 2.3 The Licensee shall establish a monitoring programme and the date and time of monitoring in respect of each sample taken. Sample shall be recorded together with the results of the analysis as well as other significant information (low flow, flooding, pollution incident, etc.).
- 2.4 The quantity of water stored shall be recorded as at the last day of each month.

#### 3. Dam Safety Requirements

- 3.1 The construction, operation, and maintenance of all dam facilities classified as a dam with a safety risk, 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).

3.2 The Licensee shall supply any information, drawings, specifications, design assumptions, calculations, documents and test results when requested by the Provincial Head.

3.3 The Licensee is not exempted from compliance with any applicable Dam Safety Regulations published under Government notice R.139 of July 2012, read with Chapter 12 of the Act.

**4. Construction of Dam(s)**

4.1 The as-built plans and specifications of the dam(s) must be submitted to the Provincial Head for his/her records.

4.2 The Government reserves the right to construct storage works at any time in any stream and to store all surplus water reaching the dam(s) and to control the allocation of such water.

4.3 Construction of the dam(s) may not commence unless the required authorisation to build has been issued by the Dam Safety Office of the Department.





**APPENDIX IV**

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

**1. CONSTRUCTION, OPERATION AND MAINTENANCE**

1.1 The Licensee shall carry out and complete all the activities, including the construction and operation of the facilities indicated in Table 4, according to the Report and according to the final plans submitted with the integrated water use licence application.

**Table 4: Details of waste water management facilities**

Purpose	Capacity/ Volume (m <sup>3</sup> , tonnes and/or m <sup>3</sup> /annum)	Property Description	Co-ordinates
Storing water from the tailings facility in a return water dam	15 768m <sup>3</sup>	Mamathwan 331 RD Portion 16	27°22'25.1"S 22°56'35.7"E
Storing water into Dirty water dam	613 200 m <sup>3</sup> /a /10 678.4m <sup>3</sup>	Mamathwan 331 RD Portion 16	27°23'30.9"S 22°57'48.1"E
Workshop collection dam	1446 m <sup>3</sup> /a	Mamathwan 331 RD Portion 16	27°23'20.1"S 22°57'38.2"E
Tailling/Slimes dam	85 838 m <sup>3</sup> /a/227 760 tons	Mamathwan 331 RD Portion 16	27°22'28.7"S 22°56'42.7"E

- 1.2 The construction of the dams listed in Table 4 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).
- 1.3 Within 30 days after the completion of the water use activities listed in Table 4 in accordance with the relevant provisions of this licence, the Licensee shall in writing; under reference 27/2/2/D1041/7/9, inform the Provincial Head thereof. This shall be accompanied by a signature of approval from the registered civil design professional confirming that the construction was done according to the design plans referred to in the Report.
- 1.4 The Licensee must ensure that the disposal of the waste water and the operation and maintenance of the system are done according to the provisions in the Report.
- 1.5 The Licensee shall as well submit a set of as-built drawings to the Provincial Head after the completion of the waste facilities listed in Table 4.
- 1.6 The waste facilities listed in Table 4 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.



1.7 The Licensee shall use acknowledged methods for sampling and the date, time and sampler must be indicated for each sample.

## 2. STORAGE OF WASTE OR WATER CONTAINING WASTE

2.1 The Licensee is authorised to dispose of a maximum quantity in cubic metres (m<sup>3</sup>) of waste or water containing waste per annum into the waste management facilities on the property described in Table 5:

**Table 5: Disposal of Waste/Water containing Waste**

Purpose	Capacity/ Volume (m <sup>3</sup> , tonnes and/or m <sup>3</sup> /annum)	Property Description	Co-ordinates
Storing dirty water from tailings facility in return water dam	15 768m <sup>3</sup>	Mamathwan 331 RD Portion 16	27°22'25.1"S 22°56'35.7"E
Storing dirty water in dirty water dam	613 200 m <sup>3</sup> /a /10 678.4m <sup>3</sup>	Mamathwan 331 RD Portion 16	27°23'30.9"S 22°57'48.1"E
Workshop collection dam	1446 m <sup>3</sup> /a	Mamathwan 331 RD Portion 16	27°23'20.1"S 22°57'38.2"E
ROM primary product stockpile	24 260 tons	Mamathwan 331 RD Portion 17	27°23'07.5"S 22°58'06.8"E
Low grade product stockpile	100 000 tons	Mamathwan 331 RD Portion 16	27°23'14.1"S 22°57'44.9"E
Lumpy product stockpile	2 040 000 tons	Mamathwan 331 RD Portion 16	27°23'32.1"S 22°58'09.1"E
Fines product stockpile	480 000 tons	Mamathwan 331 RD Portion 17	27°23' 31.7"S 22°58' 10.8"E
Eastern waste rock dump	62 160 tons	Mamathwan 331 RD Portion 17	27°23'48.9"S 22°58'24.8"E
Western waste rock dump	34 663 tons	Mamathwan 331 RD Portion 16 and 17	27°22'52.0"S 22°57'16.8"E
Taillings/slimes dam	85 838 m <sup>3</sup> /a/227 760 tons	Mamathwan 331 RD Portion 16	27°22'28.7"S 22°56'42.7"E
Dust suppression	105 996 m <sup>3</sup> /a	Mamathwan 331 RD Portion 16, 17 and 18	Various areas on mining properties

2.2 The quantity of water containing waste authorised to be disposed of in terms of this licence may not be exceeded without authorisation from the Provincial Head.

## 3. MONITORING

3.1 The Licensee shall monitor on monthly basis the water resources at groundwater monitoring points to determine the impact of the facility and other mining activities on the water quality by taking samples at the monitoring points as indicated in Table 6:

**Table 6: Ground water monitoring points**



Borehole ID	Latitude (S)	Longitude (E)	Depth	Purpose
(TSH01)	27°22'47.4"S	22°57'55.0"E	30m	Down gradient, shallow groundwater level/quality
(TSH02)	27°22'36.7"S	22°57'20.3"E	30m	Down gradient, shallow groundwater level/quality

- 3.2 The date, time and monitoring point in respect of each sample taken shall be recorded together with the results of the analysis.
- 3.3 Monitoring points must not be changed prior to notification to and written approval by the Provincial Head.
- 3.4 An Aquatic Scientist approved by the Provincial Head must establish a monitoring programme for the following indices: Invertebrate Habitat Assessment System (IHAS) and the latest SASS (South African Scoring System). Sampling must be done once during the summer season and once during the winter season, annually, to reflect the status of the river upstream and downstream of the wastewater contaminated facilities as indicated in Table 6
- 3.5 Analysis shall be carried out in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), in terms of the Standards Act, 1982 (Act 30 of 1982).
- 3.6 The methods of analysis shall not be changed without prior notification to and written approval by the Department.
- 3.7 Proper ground and surface water monitoring network should be established to monitor the quality and quantity of groundwater as per the Report recommendation and ensuring that water used by other water users are safeguarded in accordance to Chapter 14 of the National Water Act, 1998.

#### 4 WATER RESOURCE PROTECTION

- 4.1 The impact of the activities of the wastewater containment facilities on groundwater shall not exceed the interim resource water quality objective (RWQO) for the management unit as detailed in the Water Quality Reserve for the area as set out in Table 7:

**Table 7: Resource quality objectives**

Parameters	Groundwater quality reserve
Sodium (mg/l)	100 – 200
Total Dissolved Solids	450 – 1000
Magnesium (mg/l)	30 -70
Calcium (mg/l)	80 – 150
Chloride (mg/l)	100 – 200
Sulphate (mg/l)	200 – 400
Faecal coliforms	0 – 1
Nitrate (mg/l)	6 – 10
Fluoride (mg/l)	1 – 1.5
Ph	5 – 6& 9 – 9.5
Electrical Conductivity	70 – 150

## 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.
- 5.2 The Licensee shall submit the results of analysis for the monitoring requirements to the Provincial Head on a quarterly basis under the reference number 27/2/2/B312/6/4.
- 5.3 The Licensee shall submit the nature and the quality of waste disposed of into the following wastewater facilities:
- 5.3.1 Pollution control dams
  - 5.3.2 Return water dam
  - 5.3.3 Workshop collection dam
  - 5.3.4 Talling/slimes dam
  - 5.3.5 Office French drains for sewage disposal

## 6. STORMWATER MANAGEMENT

- 6.1 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 or spilled on the premises.
- 6.2 Increase runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that stormwater does not lead to bank instability and excessive levels of silt entering the stream.
- 6.3 Stormwater shall be diverted from the mine complex site and roads and shall be managed in such a manner as to disperse runoff and concentrating the stormwater flow.
- 6.4 Where necessary works must be constructed to attenuate the velocity of any stormwater discharge and to protect the banks of the affected watercourses.
- 6.5 Stormwater control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.
- 6.7 Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that stormwater does not lead to bank instability and excessive levels of silt entering the streams.
- 6.8 All stormwater that would naturally run across the pollution areas shall be diverted via channels and trapezoidal drains designed to contain the 1:50 year flood.

6.9 Polluted stormwater captured in the stormwater control dams shall be pumped back to the processing plant for reuse and recycling.

## 7. PLANT AREAS AND CONVEYANCES

7.1 Pollution caused by spills from the conveyances must be prevented through proper maintenance and effective protective measures especially near all stream crossings.

7.2 All reagent storage tanks and reaction units must be supplied with a bunded area built to the capacity of the facility and provided with sumps and pumps to return the spilled material back into the system. The system shall be maintained in a state of good repair and standby pumps must be provided.

7.3 Any hazardous substances must be handled according to the relevant legislation relating to the transport, storage and use of the substance.

7.4 Any access roads or temporary crossings must be:

7.4.1 non-erosive, structurally stable and shall not induce any flooding or safety hazard and;

7.4.2 repaired immediately to prevent further damage.

## 8. ACCESS CONTROL

8.1 Strict access procedures must be followed in order to gain access to the property. Access to the waste water containment facilities must be limited to authorised employees of the Licensee and their contractors only.

8.2 Notices prohibiting unauthorised persons from entering the controlled access areas as well as internationally acceptable signs indicating the risks involved in case of an unauthorised entry must be displayed along the boundary fence of these areas.

## 9. CONTINGENCIES

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

9.1.1 operating errors;

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

9.1.3 environmental factors (e.g. flood);

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

9.1.5 other causes.

9.2 The Licensee must, within 24 hours, notify the Provincial Head of the occurrence or potential occurrence of any incident which has the potential to cause, or has caused water pollution, pollution of the environment, health risks or which is a contravention of the licence conditions.

- 9.3 The Licensee must, within 14 days, or a shorter period of time, as specified by the Provincial Head, from the occurrence or detection of any incident referred above, submit an action plan, which must include a detailed time schedule, to the satisfaction of the Provincial Head of measures taken to:
- 9.3.1 correct the impacts resulting from the incident;
  - 9.3.2 prevent the incident from causing any further impacts; and
  - 9.3.3 prevent a recurrence of a similar incident.

## 10. AUDITING

- 10.1 The Licensee shall conduct an annual internal audit on compliance with the conditions of this licence. A report on the audit shall be submitted to the Provincial Head within one (1) month of finalisation of the report, and shall be made available to an external auditor should the need arise.
- 10.2 The Licensee shall appoint an independent external auditor to conduct an annual audit on compliance with the conditions of this licence. The first audit must be conducted within six (6) months of the date this licence was issued and a report on the audit shall be submitted to the Provincial Head within one month of finalisation of the report.

## 11. INTEGRATED WATER AND WASTE MANAGEMENT

- 11.1 The Licensee must update an Integrated Water and Waste Management Plan (IWWMP), which must together with the updated Rehabilitation Strategy and Implementation Programme (RSIP), be submitted to the Provincial Head for approval within one (1) year from the date of issuance of this licence.
- 11.2 The IWWMP and RSIP shall thereafter be updated and submitted to the Provincial Head for approval, annually.
- 11.3 The Licensee must, at least one hundred and eighty (180) days prior to the intended closure of any facility, or any portion thereof, notify the Provincial Head of such intention and submit any final amendments to the IWWMP and RSIP as well as a final Closure Plan, for approval.
- 11.4 The Licensee shall make full financial provision for all investigations, designs, construction, operation and maintenance for a water treatment plant should it become a requirement as a long-term water management strategy.

## 12. GENERAL CONDITIONS

- 12.1 Water samples must be taken from all the monitoring boreholes by using approved sampling techniques and adhering to recognized sampling procedures. Samples should be analyzed for both organic as well as inorganic pollutants, as mining activity often lead to hydrocarbon spills in the form of diesel and oil. At least the water quality parameters on Table 7 should be analyzed.

- 12.2 Water samples should be recorded on a data sheet. It is proposed that the data should be entered into an appropriate computer database and reported to the Department.
- 12.3 The final backfilled opencast topography should be engineered such that runoff is directed away from the opencast areas.
- 12.4 The Licensee must ensure in advance that alternative water supply for external water users is provided to these users should groundwater resources be impacted
- 12.5 Pollution control dam must be designed in such a manner that any spillage can be contained and reclaimed without any impact on the surrounding environment. A plan must be in place to stop overflowing in dams during the rainy season.
- 12.6 Geochemical assessments should be done on the discard material during the mining operation.
- 12.7 The Licensee shall at all times together with the conditions of this licence adhere to the Regulations on use of water for mining and related activities aimed at the protection of water resources (Government Notice 704 of 4 June 1999).



## APPENDIX V

### Section 21 (j) of the Act: Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people

1. This licence authorises the removal, discharging or disposing of a maximum volume of water found underground for the efficient continuation of an activity as set out in Table 8:

**Table 8: Section 21 (j) water use activities**

Purpose	Volume (m <sup>3</sup> , m <sup>3</sup> /annum)	Property Description	Co-ordinates
Open pit dewatering	57 720 m <sup>3</sup> /a	Mamathwan 331 RD Portion 17	27°22'47.7"S 22°51'55.0"E

2. The quantity of the water authorised to be removed and disposed of into the pollution control dam in terms of this license may not be exceeded without prior authorisation by the Department.
3. The Licensee shall provide any water user whose water supply is impacted by the water use with potable water.
4. The quantity of water removed from underground must be metered and recorded on a daily basis.
5. Groundwater levels shall be monitored every six (6) months (once in the beginning of the dry season and once in the beginning of the wet season).
6. Self-registering flow meters must be installed in the delivery lines at easily accessible positions near the dewatering points.
7. The flow metering devices shall be maintained in a sound state of repair and calibrated by a competent person at intervals of not more than once in two (2) years. Calibration certificates shall be available for inspection by the Provincial Head or his/her representative upon request.
8. Calibration certificates in respect of the pumps must be submitted to the Provincial Head after installation thereof and thereafter at intervals of two years.
9. The date and time of monitoring in respect of each sample taken shall be recorded together with the results of the analysis.
10. Analysis shall be carried out in accordance with methods prescribed by and obtainable from the South African Bureau of Standards, in terms of the Standards Act, 1982 (Act 30 of 1982).
11. The methods of analysis shall not be changed without prior notification to the Licensee and



written approval by the Provincial or his/her delegated nominee.

12. The Provincial Head must be informed of any incident that may lead to groundwater being disposed of contrary to the provisions of this license, by submitting a report containing the following information:
  - 12.1 nature of the incident (e.g. operating malfunctions, mechanical failures, environmental factors, loss of supply services, etc);
  - 12.2 actions taken to rectify the situation and to prevent pollution or any other damage to the environment; and
  - 12.3 measures must be taken to prevent re-occurrence of any similar incident.
13. The Licensee shall follow acceptable construction, maintenance and operational practices to ensure the consistent, effective and safe performance of the groundwater removal system.
14. Reasonable measures must be taken to provide for mechanical, electrical or operational failures and malfunctions of the underground water removal system.

**[END OF LICENCE]**

