water affairs
Department:
Water Affairs
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, ***Trevor Balzer,*** in my capacity as Director-General (Acting) in the Department of Water Affairs acting under authority of the powers delegated to me by the Minister of Water Affairs and Environmental Affairs, hereby authorise the following water uses in respect of this licence.

SIGNED: Trevor Balzer

DATE: 2/05/2013

LICENCE NO: 08/C11B/AGJ/2141
File No: 16/2/7/C112/C155

1. **Licensee:** **Coal of Africa (Pty) Ltd-Mooiplaats Colliery**
   Postal Address: The Campus
   Gabba Building 2nd floor
   57 Sloane Street
   Bryanston
   2021

2. **Water Uses**

2.1 Section 21(a) of the Act: Taking of water subject to the conditions as set out in Appendices I and II.

2.2 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 III

2.3 Section 21(j) of the Act: Removing, discharging or disposing of water found underground, subject to the conditions set out in Appendices I and IV.

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3. Properties on which the use will be exercised

Table 1: properties on which the water use will be exercised

	Water Use	Property description / Farm Name
3.1	Section 21(a) of the Act: taking water from boreholes for potable and process water	Portion 2 of Mooiplaats 290 IT
3.2	Section 21(g) of the Act: Disposal of mine affected water into three Settling Dams and North Shaft Return Water Dam	Portion 1 of Mooiplaats 290 IT
3.3	Section 21(g) of the Act: Disposal of mine affected water into Plant Erickson Dam, and dust suppression.	Portion 9 of Mooiplaats 290 IT
3.4	Section 21(g) of the Act: Storing of waste into a Co disposal facility, and coal stockpile	Portion 1 of Mooiplaats 290 IT
3.5	21(j) of the Act: Dewatering of North shaft	Portion 9 of Mooiplaats 290 IT

4. Registered owners of the Properties

4.1 Eglin Investments no.44 (Pty) Limited

5. Licence and Review Period

5.1 This licence is valid for a period of twenty (20) years from the date of issuance and, it may be reviewed every five (5) years.

6. 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.

"The Regional Head" means the Regional Chief Director: Gauteng, Department of Water Affairs, Private Bag X 995, Pretoria, 0001.

"Report" refers to the report entitled "Updating of the Water Uses Required for Mooiplaats Colliery" as compiled by GCS Environmental Consultants as well as all other documentations and communication (emails, letters, verbal, etc) related thereto.

7. Description of Activity

The licence authorizes the taking of water from boreholes for domestic and for processing purposes in terms of section 21(a); disposal of mine affected water into three settling dams and an Erickson Dam, and dust suppression in terms of section 21(g); and dewatering of underground workings for continuation of an activity in terms of section 21(j).

APPENDIX I

GENERAL CONDITIONS FOR 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 Regional Head of any change of name, address, premises and/or legal status.

4. If the properties in respect of which this licence is issued is subdivided or consolidated, the Licensee must provide full details of all changes in respect of the properties to the Regional Head of the Department within 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 of 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 Regional Head within one month of the 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 3 (three) months of the date this licence is issued and a report on the audit shall be submitted to the Regional Head within one month of finalisation 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 years. Calibration certificates shall be available for inspection by the Regional Head or his/her representative upon request.

13. Any incident that causes or may cause water pollution must be reported to the Regional Head or his/her designated representative within 24 hours.

14. The Licensee shall ensure that they pay the water use charges and their account is up to date.

15. Should it be established that you have engaged in water use activities prior the granting of this licence, cost of the usage may be established and you will be liable for penalty.

APPENDIX II

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

1. This licence authorises the taking of a maximum quantity of water from boreholes on the farms as indicated in Table 2 below, for mining (during dry periods only) and domestic purposes.

Table 2: water from boreholes for domestic and potable use

Activities	Purpose	Properties	Total Water (m^3/a)	Co-ordinate
Section 21 (a):Usutu borehole 1	Process water	Portion 2 of Mooiplaats 290 IT	16 425	S 26°38'28.5" E 30°07'00.1"
Section 21 (a):Usutu borehole 2	Process water	Portion 2 of Mooiplaats 290 IT	16 425	S 26°38'28.5" E 30°07'01.0"
Section 21 (a):Usutu borehole 3	Process water	Portion 2 of Mooiplaats 290 IT	16 425	S 26°38'29.4" E 30°06'59.1"
Section 21 (a):Usutu borehole 4	Process water	Portion 2 of Mooiplaats 290 IT	16 425	S 26°38'29.4" E 30°07'00.1"
Section 21 (a):Potable Water borehole 1(North shaft)	Potable water	Portion 9 of Mooiplaats 290 IT	6 083	S 26°39'04.4" E 30°05'54.0"
Section 21 (a):Potable Water borehole 2(North shaft)	Potable water	Portion 9 of Mooiplaats 290 IT	6 083	S 26°38'56.6" E 30°05'54.7"
Section 21 (a):Potable Water borehole 3(North shaft)	Potable water	Portion 9 of Mooiplaats 290 IT	6 083	S 26°38'53.0" E 30°06'02.5"

2. The quantity of water authorised to be taken in terms of this licence may not be exceeded without prior authorisation by the Minister.

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 Licensee shall continually investigate new and emerging technologies and put into practice water efficient devices or apply technique for the re-use of water containing waste, in an endeavour to conserve water at all times.

5. All water taken from the resource shall be measured as follows:

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

   5.2 the licence shall keep record of all water taken and a copy of the records shall be forwarded to the Regional Head on or before end of January and end July of each year.

6. No water taken may be pumped, stored, diverted, or alienated for purposes other than intended in this licence, without written approval by the Minister or his/her delegated nominee.

7. The Licensee shall install and monitor appropriate water measuring to measure the amount of water abstracted, received and/or consumed, as applicable to the infrastructure.

8. 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 the Department's Raw Water Pricing Strategy.

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

10. The Department accepts no liability for any damage, loss or inconvenience, of whatever nature, suffered as a result of-

    10.1 shortage of water;
    10.2 inundation or flood;
    10.3 required reserve releases.

11. The Licensee shall ensure that all measuring devices are properly maintained and in good working order and must be easily accessible. This shall include a programme of checking, calibration, and/or renewal of measuring devices.

12. The Licensee shall establish and implement a continual process of raising awareness amongst itself, its workers and stakeholders for the need to for Water Conservation and Water Demand Management.

APPENDIX III

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

1. CONSTRUCTION AND OPERATION

1.1 The Licensee shall carry out and complete all the activities, including the construction and operation of the water containing waste containment facilities according to the final plans as approved by the Regional Head.

1.2 The construction of the above structures 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.

1.3 Within 30 days after the completion of the activities referred here in accordance with the relevant provisions of this licence, the Licensee shall in writing, under reference 16/2/7/C112/C81/C155, inform the Regional Head 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.

1.4 The Licensee must ensure that the disposal of the waste and water containing waste 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 Regional Head after the construction of the water containing waste and waste management facilities

1.6 The water containing waste and waste containment facilities 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 detailed designs drawings of all the dirty water system including stormwater management plan should be submitted within a year after the issuance of the licence.

2. STORAGE OF WATER CONTAINING WASTE

2.1 The Licensee is authorized to dispose waste or water containing waste of maximum quantities into waste management facilities on the farms as indicated in Table 3 below:

Table 3: Volumes of waste and water containing waste to be disposed at the waste disposal facilities

Facility	Volume in (m^3/a) or tons/a	Waste Description	Geographic Position	Farm Name	Capacity
North Shaft Settling Dam 1	459 030 m^3/a	Collects water from PCD and shaft water, sewage effluent and water from boreholes(dry periods only)	S 25°42'24.6" E 29°58'37.2"	Portion 1 of Mooiplaats 290 IT	13 320
North Shaft Settling Dam 2	452 145 m^3/a	Stores water from Settling Dam 1	S 25°58'27.2" E 30°06'01.6"	Portion 1 of Mooiplaats 290 IT	13 500
North Shaft Settling Dam 3	402 112 m^3/a	Water collected from settling Dam 2	S 26°38'30.0" E 30°06'02.1"	Portion 1 of Mooiplaats 290 IT	20 160
North Shaft Return Water Dam	320 645	Collects water from co disposal facility	S 26°38'15.6" E 30°05'42.9"	Portion 1 of Mooiplaats 290 IT	17 438
Plant Erickson Dam	423 400	Receives water from Settling Dam 3	S 26°38'44.3" E 30°05'44.3"	Portion 9 of Mooiplaats 290 IT	2 000
U/G Erickson Dams	21 900	water used for underground supply, collected from plant Erickson Dam	S 26°38'31.9" E 30°05'51.1	Portion 1 of Mooiplaats 290 IT	2000
Pollution Control Dam	111 870	collects dirty run off	S 25°38'22.4" E 30°06'07.6"	Portion 1 of Mooiplaats 290 IT	23 000
Co disposal facility(North Shaft	325 133	Slurry and discards	S 26°38'27.9" E 30°05'33.5"	Portion 9 of Mooiplaats 290 IT	11 695 320
Middlings stockpile	282 000 tons	Coal stockpile	S 26°38'37.1" E 30°05'35.8"	Portion 1 of Mooiplaats 290 IT	
Primary stockpile	760 000 tons	coal product from coal washing plant	S 26°38'37.1" E 30°05'40.4	Portion 1 of Mooiplaats 290 IT	
ROM 01 stockpile,	299 500 tons	coal from mining before processing	S 26°38'44.7" E 30°05'43.5"	Portion 9 of Mooiplaats 290 IT	
ROM 02 stockpile	793 761 tons	coal from mining before processing	S 26°38'40.1" E 30°05'46.7"	Portion 9 of Mooiplaats 290 IT	

2.2 The Licensee is authorised to suppress dust on haul roads with a volume of water containing waste not exceeding twenty one thousand, nine hundred cubic meters per annum (21 900m^3/a) of contaminated water from a Erickson Dam.

3. QUALITY OF WASTE WATER TO BE DISPOSED

3.1 The quality of contaminated water disposed of into the Settling Dams, Return Water Dam, Plant Erickson Dam and Pollution Control Dam shall be of the following quality:

Table 4: Quality of water to be disposed into the containment facilities

Substance/Parameter	Range
Ph	3.5 – 8.5
Ammonia(NH3) in mg/l	0.24
Electrical conductivity (Ec) in mS/m	150
Flouride (F) in mg/l	3.23
Total Dissolved Solids (TDS) in mg/l	1288
Chlorides (Cl) in mg/l	116.66
Sulphate (SO_4) in mg/l	740
Sodium (Na) in mg/l	725
Calcium(Ca) in mg/l	87
Magnesium(Mg) in mg/l	51.40
Manganese(Mn) in mg/l	0.15
Iron(Fe)in mg/l	0.001
Aluminium (Al) in mg/l	0.09

4. MONITORING

4.1 The Licensee shall monitor on monthly basis the water resources at surface water monitoring point and Ground water monitoring point to determine the impact of the wastewater facilities and other activities on the water quality by taking samples at the monitoring points as described in Table 5 and 6 below:

Table 5: Surface water monitoring points

Locality	Description	Latitude	Longitude
WT-S1	Witpuntspruit/n2 crossing at Camden power downstream from the Humanspruit confluence below west mine	26.59307	30.09617
WT– S2	Witpuntspruit below south mine before tributary from the southwest originating on Mooiplaats-down gradient from power station	26.61826	30.11211
WT– S3	Witpuntspruit tributary below south mine before tributary from the southwest originating on Mooiplaats-down gradient from power station	26.62014	30.10781

Locality	Description	Latitude	Longitude
WT– S4	Witpuntspruit above east mine-before tributary from Mooiplaats in the southwest –down gradient from coal of Africa	26.62294	30.11463
WT– S5	Witpuntspruit tributary from Mooiplaats in the southwest –above east mine- down gradient from coal of Africa	26.62863	30.11539
WT– S6	Witpuntspruit below east mine before confluence with Vaal River	26.63393	30.13373
VL-S1	Vaal River/n2 before Witpunspruit confluence-Mooiplaats northern boundary	26.64804	30.15098
VL-S2	Vaal River/ rail crossing below Sterkspruit confluence-Mooiplaats/Adrianopl e boundary	26.67879	30.12411
VL-S3	Vaal River/ de emigratie road crossing below Wolwespruit confluence	26.70167	30.08288
VL-S4	Vaal River along Klipbank/Willems Dal boundary –Klipbank southern boundary	26.71447	30.06519

Table 6: Groundwater monitoring points

Monitoring Point	East (DMS)	South (DMS)
GKL-1	30°4'19.5"E	26°41'45.7"S
GKL-4D	30°4'57.1"E	26°42'6"S
GKL-2S	30°4'57.7"E	26°42'6.4"S
GAD-2C	30°6'50.9"E	26°42'45.7"S
GAD-1	30°6'5.2"E	26°43'38.4"S
GKL-9D	30°6'16.2"E	26°40'20.3"S
GKL-8M	30°6'16.7"E	26°40'20.4"S
GKL-5S	30°5'47.3"E	26°39'55.5"S
GKL-6M	30°5'47.7"E	26°39'55.5"S

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

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

4.4 Monitoring points shall not be changed prior to notification and written approval by the Regional Head.

4.5 Water quality tests to be performed on the monitoring boreholes on a quarterly basis in order to determine the risks to the receiving environment. The data gathered in the investigation must be reported annually to the Regional Head. If any high water quality levels as specified is exceeded, the Licensee must institute an investigation to determine the cause of pollution.

4.6 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).

4.7 The methods of analysis shall not be changed without prior notification to and written approval by the Minister.

4.8 Water quality testing to be performed on the Pollution Control Dam and Make up Water Dam, must be done on a quarterly basis in order to determine the risks to the receiving environment. The data gathered in the investigation must be reported annually to the Regional Head. If any concentrations levels as specified above are exceeded, the Licensee must institute an investigation to determine the cause of pollution.

5. WATER RESOURCE PROTECTION

5.1 The impact of the activities of the mine on groundwater shall not exceed the following water quality range as provided for by the groundwater reserve:

Table 7: Summary of groundwater reserve

Variable	Reserve(RQO)
pH	8.78
Electrical Conductivity	150
Chloride (mg/l)	19.97
Nitrate (mg/l)	0.07
Sulphate (mg/l)	0.25
Fluoride (mg/l)	0.30
Magnesium (mg/l)	6.96
Calcium (mg/l)	15.18
Sodium (mg/l)	61.55

6. REPORTING

6.1 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.

6.2 The Licensee shall submit the results of analysis for the monitoring requirements to the Regional Head on a quarterly basis under reference number 16/2/7/C112/C155.

6.3 The Licensee shall at all times ensure that Acid Mine Drainage (AMD) is prevented and minimised during the operation and after operation of the mine

7. STORMWATER MANAGEMENT

7.1 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.

7.2 Increase runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that storm water does not lead to bank instability and excessive levels of silt entering the stream.

7.3 Stormwater shall be diverted from the mining area complex site and roads and must be managed in such a manner as to disperse runoff and concentrating the storm-water flow.

7.4 Where necessary works must be constructed to attenuate the velocity of any storm-water discharge and to protect the banks of the affected watercourses.

7.5 Stormwater control works must be constructed, operated and maintained in a sustainable manner throughout the impacted area.

7.6 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.

7.7 The polluted stormwater captured in the storm water control dams shall be pumped to the process water treatment plant for reuse and recycling.

8. PLANT AREAS AND CONVEYANCES

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

8.2 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.

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

8.4 Any access roads or temporary crossings must be:

8.4.1 non-erosive, structurally stable and shall not induce any flooding or safety hazard; and
8.4.2 be repaired immediately to prevent further damage.

9. ACCESS CONTROL

9.1 Strict access procedures must be followed in order to gain access to the property. Access to the Dirty Water management Facilities (all dams) must be limited to authorized employees of the Licensee and their Contractors only.

9.2 Notices prohibiting unauthorized persons from entering the areas referred to in condition 9.1, as well as internationally acceptable signs indicating the risks involved in case of an unauthorized entry must be displayed along the boundary fence of these areas.

10. CONTINGENCIES

10.1 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 Regional Head upon request. Such malfunctions shall be tabulated under the following headings with a full explanation of all the contributory circumstances:

10.1.1 operating errors;
10.1.2 mechanical failures (including design, installation or maintenance);
10.1.3 environmental factors (e.g. flood);
10.1.4 loss of supply services (e.g. power failure); and
10.1.5 other causes.

10.2 The Licensee must, within 24 hours, notify the Regional 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.

10.3 The Licensee must, within 14 days, or a shorter period of time, as specified by the Regional 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 Regional Head of measures taken to: –

10.3.1 correct the impacts resulting from the incident;
10.3.2 prevent the incident from causing any further impacts; and
10.3.3 prevent a recurrence of a similar incident.

11. AUDITING

11.1 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 Regional Head within one month of finalisation of the audit. The report shall be made available to an external auditor should the need arise. The first audit must be conducted within 3 (three) months of the date this licence was issued and a report on the audit shall be submitted to the Regional Head within one month of finalisation of the report.

11.2 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 3 (three) months of the date of this licence and a report on the audit shall be submitted to the Regional Head within one month of finalisation of the report.

12. INTEGRATED WATER AND WASTE MANAGEMENT

12.1 The Licensee must update an *Integrated Water and Waste Management Plan (IWWMP),* which must together with the *Rehabilitation Strategy* and *Implementation Programme (RSIP),* be submitted to the Regional Head for approval within one (1) year from the date of issuance of this licence.

12.2 The Licensee shall undertake geochemical assessment on all mine residue deposit which shall together with the IWWMP be submitted to the Regional Head within a year after the issuance of the licence.

12.3 The IWWMP and RSIP shall thereafter be updated and submitted to the Regional Head for approval, annually.

12.4 The Licensee must, at least 180 days prior to the intended closure of any facility or any portion thereof, notify the Regional Head of such intention and submit any final amendments to the IWWMP and RSIP as well as a final *Closure Plan,* for approval.

12.5 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.

13. GENERAL CONDITIONS

13.1 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 following water quality parameters should be analyzed for:

- Major ions (Ca, K, Mg, Na, SO_4, NO_3, Cl, F)
- pH
- Electrical Conductivity (EC)
- Total Petroleum hydrocarbon (TPH)
- Total Alkalinity

These should be recorded on a data sheet. It is proposed that the data should be entered into an appropriate computer database and reported to the Department of Water Affairs.

13.2 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 (GN 704, 4 June 1999).

APPENDIX IV

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.**

1.1 The Licensee is authorised to remove a volume not exceeding forty three thousand, eight hundred cubic metres per annum (43 800m^3 /a) of groundwater from underground workings situated at Portion 9 of Mooiplaats 290 IT

1.2 The Licensee is authorised to extract groundwater from the mining shaft for the purposes of ensuring continued safe mining.

1.3 The disposal of water into the containment facility shall take place at the following location:

Table 8: Location of containment facility for disposal

Location	X co-ordinate	Y co-ordinate
Portion 1 of Mooiplaats 290 IT (Settling Dam 1)	S 25°42'24.6"	E 29°58'37.2"

1.4 The water removed from underground in terms of this licence shall be disposed of into a Settling Dam 1 authorized in Appendix III of this licence.

1.5 The quantity of groundwater authorized to be removed in terms of this licence may not be exceeded without prior approval by the responsible authority.

1.6 The quantity of water removed from the pit must be metered and recorded on a daily basis.

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

1.8 The quality of the water disposed into the Settling Dam1 shall not exceed the quality as specified in Appendix III (Table 4).

1.9 Self registering flow metres must be installed in the delivery lines at easily accessible positions near the dewatering points.

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

1.11 A diagrammatic plan of the entire current infrastructure for pumping of water to surface, indicating positions, capacity and quality of the water pumped must be submitted to the Regional Head within a year of issuance of the licence.

1.12 No water taken may be pumped, stored, diverted, or alienated for purposes other than intended in this licence without written approval by the Regional Head.

1.13 The Licensee shall undertake the mine planning and development, active mining operations and mine decommissioning in a manner that minimises disturbance to existing hydrological and Geohydrological systems and minimises water ingress or water 'make' into the mine.

1.14 A post closure water management programme must be developed and submitted to the Regional Head within 24 months from the date of issuance of this licence. Details on financial provision and an operational plan for implementation of the post closure management programme must be outlined.

1.15 The Licensee shall consult with Interested and Affected Parties (I & APs) on closure objectives and closure plans, and ongoing review of post-closure impacts and plans.

2. SITE SPECIFIC CONDITIONS.

2.1 Additional monitoring boreholes should be sited and drilled using approved geophysical methods. The updated groundwater monitoring plan should be submitted within six (6) months of license issuance.

2.2 Electronic measuring instruments must be installed and properly calibrated to monitor and record any fluctuation in water levels on an hourly basis, to ensure that the abstraction is not affecting neighbouring boreholes.

2.3 Water levels in boreholes must be measured before pumping starts and after 12 hour recovery period. Water levels must be measured daily by hand using the depth meter for the first four weeks and then weekly for the first six months thereafter monthly water level measurements will be required. The water level records should be submitted on annual basis.

2.4 The waste and water containing waste containment facilities designs to incorporate an HDPE geomembrane liner of 1.5mm thickness, as provided for in the report.

[END OF LICENCE]