



environment, forestry & fisheries

Department:
Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Private Bag X 447· PRETORIA ·0001· Environment House ·473 Steve Biko Road, Arcadia· PRETORIA

DEA Reference: 14/12/16/3/3/229

Enquiries: Ms Masina Litsoane

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Ms Deidre Herbst
Eskom Holding SOC Limited
Megawatt Park
P.O. Box 1091
JOHANNESBURG
2000

Tel: (011) 800 3501
Cell: (083) 660 1147
E-mail: HerbstDL@eskom.co.za

PER E-MAIL / MAIL

Dear Ms Herbst

APPLICATION FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, ACT NO. 107 OF 1998, AS AMENDED AND THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 GOVERNMENT NOTICE 921: FOR THE UPGRADE OF THE TWO EXISTING ASH DAMS AND THE CONSTRUCTION OF TWO REHABILITATION DAMS AT THE MAJUBA POWER STATION ASH DISPOSAL FACILITY IN THE MPUMALANGA PROVINCE

With reference to the above application, please be advised that the Department has decided to grant authorisation. The Environmental Authorisation (EA) and reasons for the decision are attached herewith.

In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014, as amended (the EIA Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the decision as well as the provisions regarding the submission of appeals that are contained in the Regulations.

In terms of the Promotion of Administrative Justice Act, Act No. 3 of 2000, you are entitled to the right to fair, lawful and reasonable administrative action; and to written reasons for administrative action that affects you negatively. Further your attention is drawn to the provisions of the Protection of Personal Information Act, Act No. 4 of 2013 which stipulate that the Department should conduct itself in a responsible manner when collecting, processing, storing and sharing an individual or another entity's personal information by holding the Department accountable should the Department abuse or compromise your personal information in any way.

Your attention is drawn to Chapter 2 of National Environmental Management Act, Act No. 107 of 1998 National Appeal Regulations published under Government Notice R993 in Government Gazette No. 38303 dated 08 December 2014 (National Appeal Regulations, 2014), which prescribes the appeal procedure to be followed. Kindly include a copy of this document (National Appeal Regulations, 2014) with the letter of notification to interested and affected parties in this matter.

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Should any person wish to lodge an appeal against this decision, he/she must submit the appeal to the appeal administrator, and a copy of the appeal to the applicant, any registered interested and affected party, and any organ of state with interest in the matter within 20 days from the date that the notification of the decision was sent to the registered interested and affected parties by the applicant; or the date that the notification of the decision was sent to the applicant by the Department, whichever is applicable.

Appeals must be submitted in writing in the prescribed form to:

The Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appeals@environment.gov.za;

By hand: Environment House
473 Steve Biko
Arcadia
Pretoria
0083; or

By post: Private Bag X447
Pretoria
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, Act No. 107 of 1998, as amended, the lodging of an appeal will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged, you may not commence with the activity until such time that the appeal is finalised.

To obtain the prescribed appeal form and for guidance on the submission of appeals, please visit the Department's website at https://www.environment.gov.za/documents/forms#legal_authorisations or request a copy of the documents at appeals@environment.gov.za.

Yours faithfully



Mr Sabelo Malaza
Chief Director: Integrated Environmental Authorisations
Department of Environment, Forestry and Fisheries

Date: 24/07/2020

cc	Ms R Mtshweni	DEDET (Mpumalanga)	Tel: 013 766 2473	Email: dq@mpg.gov.za
	Mr PB Malebye	Pixley Ka Seme Local Municipality	Tel: 013 690 6350	Email: records@pixleykaseme.co.za
	Ms M Le Roux	Advisian	Tel: 010 593 3936	Email: MarindaLeRoux.Advisian@outlook.com



**environment, forestry
& fisheries**

Department:
Environment, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Integrated Environmental Authorisation Issued in terms of

**The National Environmental Management Act, 1998 and the Environmental Impact
Assessment Regulations 2014 as amended**

And

**The National Environmental Management: Waste Act, 2008 and Government Notice 921
of 2013**

**Upgrade of the two existing ash dams and the construction of two rehabilitation dams at the
Majuba Power Station's Ash Disposal Facility**

Gert Sibande District Municipality

<i>Authorisation register number:</i>	<i>14/12/16/3/3/3/229</i>
<i>Last amended:</i>	<i>First Issue</i>
<i>Holder of integrated authorisation:</i>	<i>Eskom Holdings SOC Ltd</i>
<i>Location of activities:</i>	<i>MPUMALANGA PROVINCE: On ward 4, Farm 263 within Pixley Ka Seme Local Municipality</i>

**This authorisation does not negate the holder of the authorisation's responsibility to comply with any
other statutory requirements that may be applicable to the undertaking of the activity.**

1. DECISION

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this integrated environmental authorisation ("the environmental authorisation") that the applicant should be authorised to undertake the NEMA EIA and NEMWA listed activities specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure "I" to this environmental authorisation.

2. NEMA EIA AND NEMWA ACTIVITIES AUTHORISED

By virtue of the powers conferred on it by NEMA, the NEMA EIA Regulations, 2014 as amended, NEMWA and Government Notice 921 of 29 November 2013 the Department hereby authorises –

ESKOM HOLDINGS SOC LTD

with the following contact details –

Ms Deidre Herbst

Eskom Holdings ,Megawatt Park

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to undertake the following activities (hereafter referred to as "the activities") listing Notice 1 and 2 (GN R 983 and 984 of 2014 EIA Regulations as amended:

Listed activities	Activity/Project description
<p><u>Listing notice 1: Activity 12</u></p> <p>The development of—</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres;</p> <p>(a) a watercourse</p>	<p>The gravel road with a 5m width and 300m length will be deviated crossing a drainage line within the RD2 area.</p> <p>The RD 1 and 2 will be situated within 32m of a non-perennial drainage line.</p> <p>The proposed ash dams will have a footprint of more than 100 m²:</p> <ul style="list-style-type: none"> • RD1 – 80 000 m² RD2 – 19 300 m²
<p><u>Listing notice 1: Activity 19</u></p> <p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse.</p>	<p>RD2 is within a non-perennial drainage line. The construction of RD 2 will involve excavation of soil or material of more than 10 cubic metres.</p>
<p><u>Listing notice 1: Activity 63 (iii)</u></p> <p>The expansion of facilities or infrastructure for the transfer of water from and to or between any combination of the following—</p> <p>(iii) impoundments;</p> <p>where the capacity will be increased by 50 000 cubic metres or more per day, but excluding water treatment works where water is treated for drinking purposes.</p>	<p>There will be a need to transfer water from one dam to another. A pump house will be used if one dam is full and pump the overflow to another dam.</p>
<p><u>Listing notice 1: Activity 66 (i)</u></p> <p>The expansion of a dam where—</p> <p>The highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, was originally 5 metres or higher and where the height of the wall is increased by 2, 5 metres or more.</p>	<p>Applicable to all ash and rehabilitation dams as there would be a need to transfer water from one dam to the other in some cases. A pump house will be used if one dam is full and pump the overflow to another dam.</p>

Listed activities	Activity/Project description
<p><u>Listing Notice 2: Activity 6</u></p> <p>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent.</p>	<p>The construction of two new Rehabilitation Dams and the extension of the two existing ash dams for the Majuba Power Station continuous ash disposal facility (ADF) require an amendment of IWUL.</p>
<p><u>Listing Notice 2: Activity 15</u></p> <p>The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation.</p>	<p>The combined footprint size of the dams is more than 20 hectares.</p> <p>AD1 -40500 m² (4.05 ha) AD2-160 000m²(16 ha) RD1 -80 000m² (8ha) RD2- 19 300m² (1.9ha).</p>
<p><u>Listing Notice 2: Activity 16</u></p> <p>The development of a dam where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high-water mark of the dam covers an area of 10 hectares or more.</p>	<p>The Rehabilitation Dam 1 wall height will be a maximum of 7m, whilst the compartment wall will be a maximum height of 7.6m. Ash Disposal 1 dam 577 wall height will be increased from 5 to 7m in height .0587.</p>

The waste activities in terms of National Environmental Management Waste Act (NEM: WA, Act 59 of 2008), GN R.921 of November 2013, Category A and B:

Listed activities	Activity/Project description
<p><u>GN R.921, Category A:</u></p> <p><u>Activity 13:</u> <i>The expansion of waste management activity listed in Category A or B of this schedule which does not trigger an additional waste management activity in terms of this schedule.</i></p>	<p>The existing ash dam capacity at Majuba Power Station will be expanded by construction of two Rehabilitation Dams and two ash dams.</p> <p>The proposed ash dams will have a capacity of:</p> <p>RD 1 240000 m³ RD 2 65000 m³ AD 1 150000 m³</p>

Listed activities	Activity/Project description
	AD 2 390000 m ³
<p><u>GN R.921, Category B:</u> <i>Activity 1: Storage of hazardous waste</i> <i>The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.</i></p>	<p>Storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage. Hazardous waste from the ADF will be disposed of on the ash dump of general waste at any one time, excluding the storage of waste in the proposed ash dams or lagoons</p>

as described in the Final Environmental Impact Assessment Report (FEIr) dated 12 August 2019 at:

Farm Name: Farm 263 Majuba Power Station

21 Digit SG code:

T	O	H	S	0	0	0	0	0	0	0	0	0	2	6	3	0	0	0	0
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Project co-ordinates: 29°44'50.887"E 27°06'25.078"S

- for the proposed upgrade of the two existing ash dams and the construction of two rehabilitation dams at the Majuba Power Station's Ash Disposal Facility in the Mpumalanga Province.

The proposed project will entail:

- Ash Dam (AD) 1 and Rehabilitation Dam (RD) 1 will be constructed from an existing dam on site, splitting it into two separate dams with separate functions. Hence Ash Dam 1 will be smaller than the existing dam and the Rehabilitation Dam 1 will be a new dam.
- Ash Dam 2 is an existing dam on site which will be increased in size.
- Rehabilitation Dam 2 will be a new dam on site. A patrol road in that area will be relocated to make way for the Rehabilitation Dam 2.

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Dam Description	Current Status	Current Dam Wall Height	New / Increased Dam Height (Maximum Height) *	Surface Footprint Size	Final Footprint Size	Final Volume / Storage Capacity
Ash Dam 1 (AD 1)	Existing	Compartment Wall (not existing dam wall) =5m	Compartment Wall = 7.6m (New) Dam Wall = 2m (Increase)	Existing = 110 000m ² Decrease by = 69 500m ²	40500m ²	40500m ²
Rehabilitation Dam 1 (RD1)	New			New Size = 80 000m ²	80000m ²	80000m ²
Ash Dam 2 (AD2)	Existing	3.1m	1.7m	Existing = 95 000m ² Increase by = 65 000m ²	160000m ²	390000m ³
Rehabilitation Dam 2	New	N/A	4.85m	New Reduced Size = 19 300m ²	19300m ²	65000m ³

3. SCOPE OF AUTHORISATION

- 3.1. The upgrade of the two existing ash dams and the construction of two rehabilitation dams at the Majuba Power Station's Ash Disposal Facility in the Mpumalanga Province is hereby approved.
- 3.2. Authorisation of the activities is subject to the conditions contained in this authorisation, which form part of the environmental authorisation and are binding on the holder of the environmental authorisation.
- 3.3. The Department shall by written notice to the holder of an environmental authorisation suspend with immediate effect an environmental authorisation if suspension of the authorisation is necessary to prevent harm or further harm to the environment.

- 3.4. The activities must commence within a period of **ten (10) years** from the date of issue. If commencement of the activity does not occur within that period, the environmental authorisation lapses and a new application for an environmental authorisation must be made for the activities to be undertaken.
- 3.5. Construction must be completed within five (05) years of the commencement of the activity on site.
- 3.6. Commencement with one activity listed in terms of this Environmental Authorisation constitutes commencement of all authorised activities.
- 3.7. The holder of the environmental authorisation shall be responsible for ensuring compliance with the conditions contained in this environmental authorisation. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the authorisation.
- 3.8. Any changes to, or deviations from, the project description set out in this authorisation must follow the amendment processes as prescribed in Chapter 5 (Parts 1-2) of the NEMA EIA Regulations, 2014 as amended and be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.

4. NOTIFICATION OF AUTHORISATION AND RIGHT TO APPEAL

- 4.5. The holder of the authorisation must notify every registered interested and affected party, in writing and within 14 (fourteen) calendar days of the date of this environmental authorisation, of the decision to authorise the activity.
- 4.6. The notification referred to must –
 - 4.2.1. specify the date on which the authorisation was issued;
 - 4.2.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 4.2.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 4.2.4. give the reasons of the competent authority for the decision.
- 4.7. The holder of the authorisation must publish a notice –

- 4.3.1. informing interested and affected parties of the decision;
- 4.3.2. informing interested and affected parties where the decision can be accessed; and
- 4.3.3. drawing the attention of interested and affected parties to the fact that an appeal may be lodged against this decision in terms of the National Appeal Regulations, 2014.

5. MANAGEMENT OF THE ACTIVITY

- 5.1. The Environmental Management Programme (EMPr) integrated as part of the Application for EA is hereby approved. This EMPr must be implemented and adhered to.
- 5.2. The approved EMPr and operational EMPr for the Majuba Ash Dams (AD1&AD2) and Rehabilitations Dams (RD1&RD2) must be implemented and strictly enforced during all phases of the project. It shall be seen as a dynamic document and shall be included in all contract documentation for all phases of the development when approved.
- 5.3. Changes to the approved EMPr must be submitted in accordance to the EIA Regulations applicable at the time.
- 5.4. The Department reserves the right to amend the approved EMPr should any impacts that were not anticipated or covered in the EIAr be discovered.

Frequency and process of updating the EMPr

- 5.5. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 28 below, indicate insufficient mitigation of environmental impacts associated with the undertaking of the activity, or insufficient levels of compliance with the environmental authorisation or EMPr.
- 5.6. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
- 5.7. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of the EIA Regulations, 2014 as amended.
- 5.8. The updated EMPr must have been subjected to a public participation process, which process has been agreed to by the Department, prior to submission of the updated EMPr to the Department for approval.
- 5.9. In assessing whether to grant approval of an EMPr which has been updated as a result of an audit, the Department will consider the processes prescribed in Regulation 35 of the EIA Regulations, 2014 as amended. Prior to approving an amended EMPr, the Department may

request such amendments to the EMPr as it deems appropriate to ensure that the EMPr sufficiently provides for avoidance, management and mitigation of environmental impacts associated with the undertaking of the activity.

- 5.10. The holder of the authorisation must apply for an amendment of an EMPr, if such amendment is required before an audit is required. The amendment process is prescribed in Regulation 37 of the EIA Regulations, 2014, as amended.
- 5.11. The holder of the authorisation must request comments on the proposed amendments to the impact management outcomes of the EMPr or amendments to the closure objectives of the closure plan from potentially interested and affected parties, including the competent authority, by using any of the methods provided for in the Act for a period of at least 30 days.

6. ENVIRONMENTAL CONTROL OFFICER

- 6.1. The holder of this authorisation must appoint an independent Environmental Control Officer (ECO) with experience or expertise in the field for the construction phase of the development. The ECO will have the responsibility to ensure that the conditions referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.
- 6.2. The ECO must be appointed before commencement of any authorised activity.
- 6.3. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance Monitoring of the Department.
- 6.4. The ECO must remain employed until all rehabilitation measures, as required for implementation due to construction damage, are completed and the site is ready for operation.
 - 6.4.1. The ECO must:
 - 6.4.2. Keep record of all activities on site, problems identified, transgressions noted and a schedule of tasks undertaken by the ECO.
 - 6.4.3. Keep and maintain a detailed incident (including spillage of bitumen, fuels, chemicals, or any other material) and complaint register on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/complaints.
 - 6.4.4. Keep and maintain a daily site diary.
 - 6.4.5. Keep copies of all reports submitted to the Department.
 - 6.4.6. Keep and maintain a schedule of current site activities including the monitoring of such activities.

- 6.4.7. Obtain and keep record of all documentation, permits, licences and authorisations such as waste disposal certificates, hazardous waste landfill site licences etc. required by this facility.
- 6.4.8. Compile a monthly monitoring report.

7. WASTE MANAGEMENT CONTROL OFFICER

- 7.1. The applicant must designate a Waste Management Control Officer (WMCO), who will monitor and ensure compliance and correct implementation of all conditions and provisions as stipulated in the environmental authorisation and approved EMPr related to the Majuba Ash Dams (AD1&AD2) and Rehabilitations Dams (RD1&RD2).
- 7.2. The WMCO must report any non-compliance with any environmental authorisation conditions or requirements or provisions of NEMWA to the Department through the means reasonably available.
- 7.3. The duties and responsibility of the WMCO should not be seen as exempting the holder of the environmental authorisation from the legal obligations in terms of the NEMWA.

8. RECORDING AND REPORTING TO THE DEPARTMENT

- 8.1. The holder of this authorisation must keep all records relating to monitoring and auditing on site and make it available for inspection to any relevant and competent authority in respect of this development.
- 8.2. All records and/or reports required or resulting from activities relating to this environmental authorisation must:
 - 8.2.1. be legible;
 - 8.2.2. be submitted as required and must form part of the external audit report;
 - 8.2.3. if amended, the record and/or report must be amended in such a way that the original and any subsequent amendments remain legible and are easily retrievable; and
 - 8.2.4. be retained in accordance with documented procedures which are approved by the Department.
- 8.3. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at the Department.
- 8.4. Records demonstrating compliance with conditions of this EA must be maintained for five years.

- 8.5. The holder of the environmental authorisation must keep records and update all the information referred to in Annexure II and submit this information to the Department on an annual basis.

9. ENVIRONMENTAL AUDIT REPORT FOR CONSTRUCTION

- 9.1. The holder of the authorisation must submit an environmental audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.
- 9.2. The environmental audit report must:
- 9.2.1 Be compiled by an independent environmental auditor;
 - 9.2.2 Indicate the date of the audit, the name of the auditor and the outcome of the audit;
 - 9.2.3 Evaluate compliance with the requirements of the approved EMPr and this environmental authorisation;
 - 9.2.4 Include measures to be implemented to attend to any non-compliances or degradation noted;
 - 9.2.5 Include copies of any approvals granted by other authorities relevant to the development for the reporting period;
 - 9.2.6 Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring these issues are appropriately addressed;
 - 9.2.7 Include a copy of this authorisation and the approved EMPr
 - 9.2.8 Include all documentation such as waste disposal certificates, hazardous waste landfill site licences etc. pertaining to this authorisation; and
 - 9.2.9 Include evidence of adherence to the conditions of this authorisation and the EMP where relevant such as training records and attendance records.

10. COMMENCEMENT OF ACTIVITIES

- 10.1 The authorised activity shall not commence within twenty (20) days of the date of signature of the authorisation.
- 10.2 In terms of section 43(7), an appeal under section 43 of the National Environmental Management Act, 1998 will suspend the environmental authorisation or any provision or condition attached thereto. In the instance where an appeal is lodged you may not commence with the activity until such time that the appeal has been finalised.

- 10.3 Should you be notified by the Minister of a suspension of the authorisation pending appeal procedures, you must not commence with the activity until such time that the Minister allows you to commence with such an activity in writing.
- 10.4 The holder of this authorisation must obtain a Water Use Licence from the Department of Water and Sanitation (DWS) prior to the commencement of the project should the holder impact on any wetland or water resource. A copy of the license must be submitted to the Chief Director: *Integrated Environmental Authorisations* at this Department.
- 10.5 The holder of this authorisation must obtain Atmospheric Emission Licence from relevant authority prior to commencement of the project should the project trigger listed activities in terms of the National Environmental Management: Air Quality Act 39 of 2004. The copy of the licence obtained must be included in the first audit submitted to the Department.

11. NOTIFICATION TO AUTHORITIES

- 11.1. A written notification of commencement must be given to the Department no later than fourteen (14) days prior to the commencement of the activity. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence, as well as a reference number. This notification period may coincide with the notice of intent to appeal period.

12. OPERATION OF THE ACTIVITY

- 12.1. A written notification of operation must be given to the Department no later than fourteen (14) days prior to the commencement of the activity operational phase.
- 12.2. The holder of this authorisation must compile an operational EMPr for the operational phase of the activity or alternatively, if the holder has an existing operational environmental management system, it must be amended to include the operation of the authorised activity.

13. SITE CLOSURE AND DECOMMISSIONING

- 13.1. Should the activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

14. LEASING AND ALIENATION OF THE SITE

- 14.1. Should the holder of the environmental authorisation want to alienate or lease the site, he/she shall notify the Department in writing of such an intention at least 120 days prior to the said transaction. Should the approval be granted, the subsequent holder of the environmental authorisation shall remain liable to compliance with all licence conditions.

15. TRANSFER OF ENVIRONMENTAL AUTHORISATION

- 15.1. Should the holder of the environmental authorisation transfer holder-ship of this environmental authorisation due to a change of ownership [as provided for in terms of S24E(c) of NEMA], he/she must apply in terms of Section 52 of NEMWA.
- 15.2. Should the transfer of holder-ship of this environmental authorisation mentioned above be for any reason other than the change of ownership in the property, the holder of this environmental authorisation must inform the Department of any change in ownership in the property and must request an amendment to this environmental authorisation to reflect such change in ownership.
- 15.3. Any subsequent holder of an environmental authorisation shall be bound by conditions of this environmental authorisation.

16. INVESTIGATIONS

- 16.1. If, in the opinion of the Department, pollution, nuisances or health risks may be or are occurring on the site, the holder of the environmental authorisation must initiate an investigation into the cause of the problem or suspected problem, including such investigations as identified by the Department related to the risks posed. Should the investigation carried out reveal any unacceptable levels of pollution, such investigation must include water quality monitoring variables at the monitoring points with the frequency as may be specified by the Director:
Department of Water and Sanitation
- 16.2. Should the investigation carried out as per conditions 16.1 above reveal any unacceptable levels of pollution, the holder of the environmental authorisation must submit mitigation measures to the satisfaction of the relevant Department.

17. SPECIFIC CONDITIONS RELATED TO THE ASH AND REHABILITATION DAMS

17.1. Site Security and Access Control

17.1.1. The holder of the environmental authorisation must ensure effective access control to the ash disposal facility to prevent unauthorised entry. Weather-proof, durable and legible signs in at least three official languages applicable in the area must be displayed at each entrance to the site. The signs must indicate the risks involved in entering the site, must include the person responsible for the operation of the site.

17.2. Permissible waste

17.2.1. Any portion of the site which has been developed according to this Licence may be used for the storage of contaminated runoff from active disposal areas.

17.2.2. Waste which is not permissible on Site, must be dealt with according to the relevant legislation or the Departments policies and practices.

17.2.3. The classification and acceptance of waste must be according to the "Waste Classification and Management Regulations and associated norms and standards: (GN R 634, 23 August 2013).

17.3. Construction requirements

17.3.1 Any development which occurs within 1:100 year flood line/or within 500m from the boundary of a wetland would require a water use licence in terms of section 40 of the National Water Act, 1998 (Act 1998).

17.3.3. The holder of environmental authorisation must comply with the conditions as set in the previous Environmental Authorisation and Water Use Licence for the facilities which include amongst others:

- i.** The stability of the structures must be confirmed, for the actual materials used and recognizing the presence of an undefined fault zone and dolerite intrusions.
- ii.** The holder of environmental authorisation shall certify in writing to the Director that each package of the development is constructed in accordance with the accepted design and to be accepted CQA document (incorporating materials specifications and frequency of testing), prior to use. Such certificate of completion shall be based on supporting evidence of demonstrating CQA implementation (The J&W final design report as submitted, excluded a CQA plan, determination of service life for the exposure condition, including tensile strain and

quantification of seepage as required by the Norms and Standards for pollution control in R636 Regulation 3 (2) of the NEMWA Regulation 2013).

- iii. The pollution control dams having wall height greater than 5m and storage capacity greater than 50 000 m³ must comply with the Dam safety Regulations 2012 and be approved by the Director and DWS Safety Office prior to commencement with construction. (Particular reference is made to AD1 and AD3 which require storage capacities of 150 000 m³ and 104 647m³, with wall heights of 7 m and 5.4 m respectively, and recognising AD2 having a required capacity of 390 000m³ and wall height of 4.8 m, when taking cascade effects and similar considerations.)

17.3.4. The holder of environmental authorisation must ensure that the project specifications comply with SANS standards specifications and Treasury Regulations so as to avoid anti-competitive practices (due to the Jones and Wager declaration of a non-performance based specification of asperity height as reflected in their minutes of the October 2016 meeting, and omission of project specifications from the draft CQA submitted thereafter).

17.3.5. Speed must be less than 40km/h to avoid fauna fatalities.

17.3.6. Crossing must cater for hydrological ecological connectivity.

17.3.7. Storage of any hazardous material/substances during construction and operation should be on adequately bunded floors and the walls on bund areas must be impervious to prevent infiltration of any spill/leaks into the subsurface soil and groundwater.

17.4. Monitoring

17.4.1. Water Monitoring:

- (i) The proposed extension and construction of the ash and rehabilitation dams must be conducted and located as far as possible from the identified non-perennial streams and wetland seeps to prevent potential plume migration into these surface water features. The existing groundwater monitoring program must be extended to include monitoring boreholes up-gradient and down gradient of the proposed expansion of the ash dam facility.
- (ii) The holder of environmental authorisation must determine the exact distance of the proposed facilities in relation to the identified non – perennial streams and wetland seeps in order to ascertain and evaluate the sustainability of these watercourses to potential pollution plume.
- (iii) The holder of environmental authorisation must develop and implement a monitoring programme for the watercourses identified as well as suitable management systems to ensure monitoring of pollution sources and potential seepage.

- (iv) The ash and rehabilitation dams must not be constructed on any lineaments, dykes, fault zones or shallow water tables that have the potential to act as preferential pathways for pollution plume migration.
- (v) Inference from the existing groundwater monitoring programme (dated May 2017) confirms that the existing network accommodates only the on-going activities on site. The Licence Holder must therefore establish and drill (using suitable geophysical techniques) additional monitoring points to cater for the ash and rehabilitation dams and increase the likelihood of intercepting potential contaminated plume.
- (vi) Additional monitoring boreholes for the proposed facilities must be drilled, equipped and secured to enable effective groundwater monitoring that will yield water quality results which are a true representation of the prevailing conditions on site.
- (vii) The holder of environmental authorisation must ensure that the management of the stormwater around the ash and rehabilitation dam is such that clean surface water runoff is prevented from entering or coming into contact with the dirty surface areas. All the clean surface runoff must be diverted back into the environment.
- (viii) The holder of environmental authorisation must ensure surface runoff and potential migration of the pollution plume is contained within the boundaries of the site to prevent potential impacts on the nearby watercourses. This can be achieved through, but not limited to installation of interception boreholes or drains or cut off trenches between the proposed facilities to minimise impacts on the water quality on site.
- (ix) The holder of environmental authorisation must ensure effective maintenance of the proposed facilities for prevention of spillages or polluted water into the groundwater system and neighbouring/downstream watercourse(s).
- (x) A monitoring borehole network for the Site, one up-gradient and one down-gradient, close to the site, must be established and maintained by the Licence Holder so that unobstructed sampling, as required in terms of this Licence, can be undertaken.
- (xi) Monitoring boreholes must be equipped with lockable caps. The Director reserves the right to take water samples at any time and to analyse these samples or have them analysed.
- (xii) In the event that the groundwater and downstream users are affected by migration of pollution as a result of the power station's associated infrastructure, the Licence Holder should compensate the users with portable water.
- (xiii) The holder of environmental authorisation must ensure that the monitoring data is used to update the groundwater flow and contaminant model in an effort to effectively measure the

current and future changes in the power station operations results, possible impacts upon detection and appropriate remediation measures.

17.4.2. Detection monitoring:

- (i) The holder of environmental authorisation must ensure that installation of suitable seepage monitoring systems below the containment barrier systems and implementation of corrective procedures and measures in the event of leakage
- (ii) Monitoring for groundwater quality must be conducted for variables listed in Annexure I on quarterly basis or such frequency as determined by the Director.

17.4.3. Investigation monitoring

- (i) If, in the opinion of the Responsibility Authority, a water quality variable listed under the detection monitoring programme, as referenced under detection monitoring, shows an increasing trend, the holder of environmental authorisation must initiate a monthly monitoring programme until such time that the variables of concern are within the acceptable limits.

17.5. Leachate Management

17.5.1. The leachate detection system must be monitored on a daily basis for possible leakages. Should a leak and or failure be suspected or detected during monitoring or at any time, it must be regarded as an incident according to the reporting of incidents condition below and be addressed to the satisfaction of the Director.

17.5.2. Inspection of liners, where liners are accessible must be performed monthly. Liners must be repaired or replaced when inspection tests show deterioration or leakage and these corrective actions shall be performed to the satisfaction of the Director.

17.6. Method of analysis

- (i) The holder of environmental authorisation must carry out all tests in accordance with methods prescribed by and obtained from the South African Bureau of Standards (SABS), referred to in the Standards Act, 1982 (Act 30 of 1982), to analyse the samples monitoring programmes specified in the monitoring condition (Condition 17.4).
- (ii) The holder of environmental authorisation shall only use another method of analysis if written proof that the method is at least equivalent to the SABS method, is submitted to the Responsible Authority.

17.7. Auditing

17.7.1. Audits and inspections:

- (i) The Responsible Authority reserves the right to audit and/or inspect the Site at any time and at such a frequency as the Responsible Authority may decide, or to have the Site audited or inspected.
- (ii) The holder of environmental authorisation must take make any records or documentation available to the Responsible Authority upon request, as well as any other information the Responsible Authority may require.

17.8. Reporting

17.8.1. Reporting of incidents:

- (i) The holder of environmental authorisation must, within 24 hours, notify the Director of the occurrence or detection of any incident on the Site which has the potential to cause, or has caused water pollution.
- (ii) The holder of environmental authorisation must, within 14 days, or a shorter period of time, if specified by the Responsible Authority, from the occurrence or detection of any incident referred to in condition 17.4.3., submit an action plan, which shall include a detailed time schedule, to the satisfaction of the Responsible Authority of measures taken to-
 - (a) correct the impact resulting from the incident;
 - (b) prevent the incident from causing any further impacts; and
 - (c) prevent a recurrence of a similar incident.
- (iii) In the event that measures have not been implemented within 21 days to address impacts caused by the incident referred to in condition 17.8.1(i), or measures which have been implemented are inadequate, the Responsible Authority may implement the necessary measures at the cost and risk of the holder of environmental authorisation.

17.9. Other reports

17.9.1. The information required in terms of Condition 17.3. must be reported to the Director in a yearly report. The information must also be included into a trend report, which must contain a graphical representation of all results obtained previously at any specific point, as well as an interpretation and discussion of the results of each monitoring occasion.

17.9.2. The holder of environmental authorisation must submit the following for approval within six month of the waste management issuance:

- (i) The updated master plan with 20 m drainage buffers and 50 m wetland buffers.

- (ii) A storm-water management plan showing all drains including dams, maintenance plan, monitoring and auditing plan. The monitoring and auditing plan must include the PES, EIS, surface and groundwater quality downstream, speed, dust suppression, otter, several, vlei rat, blue korhaan, red footed falcon, planted plants.
- (iii) A clean audit on the rest of Majuba Power Station that will address watercourse characteristics.
- (iv) Water losses to the natural environment must be submitted as a percentage together with mitigation measures like treatment and discharge back to the environment.
- (v) Water sources must be indicated and the mitigation hierarchy must be motivated, the 1:100 year flood lines must be shown.
- (vi) A plant species plan must be drawn up by a landscape architect or botanist as part of rehabilitation to enhance the ecological category.
- (vii) The REC must be set and the PES must be enhanced.

17.9.3. The holder of environmental authorisation must submit a written report to the Responsible Authority regarding any deviations from plans described in this Licence and must obtain written permission from the Responsible Authority before such deviations may be implemented.

17.9.4. The issuance of this Licence does not exempt the Licence Holder from compliance with any other legislation including section 40 of the National Water Act, 1998 (Act 36 of 1998) and the Waste Act, 2008 (Act 59 of 2008).

17.9.5. The approved listed activities under NEMWA are valid for a period of ten (10) years and shall be reviewed every five (05) years from the date of issue of the Environmental Authorisation.

Date of environmental authorisation: 24/07/2020


Mr Sabelo Malaza

Chief Director: Integrated Environmental Authorisations
Department of Environment, Forestry and Fisheries

Annexure I: Reasons for Decision

1. Key factors considered in making the decision

All In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the EIR dated 12 August 2019;
- b) The mitigation measures included in the EIR dated 12 August 2019 and the EMPr;
- c) The information contained in the specialist studies contained within EIR dated 12 August 2019;
- d) The comments received from the Directorate: Authorisations & Waste Management Licensing and comments from interested and affected parties as included in the EAIR dated 12 August 2019; and
- e) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).

2. Findings

After consideration of the information and factors listed above the Department reached the following conclusions:

- a) The identification and assessment of impacts are detailed in the EIR dated 12 August 2019 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The proposed project is for the upgrade of ash dam facilities within the Ash Disposal Facility (ADF) area which will need to be constructed and extended to cater for the projected storm water required by Eskom to adequately sustain the storage of runoff ash water for the remaining life of the station.
- c) The procedure followed for impact assessment is adequate for the decision-making process.
- d) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA regulations, 2014 as amended, for public involvement.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorisation, the activities will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the activity can be mitigated to acceptable levels. The application is accordingly granted.

ANNEXURE II

**INFORMATION WHICH SHALL BE SUBMITTED ON A QUARTELY BASIS IN ACCORDANCE WITH THE
 "RECORDING AND REPORTING TO THE DEPARTMENT" ABOVE**

* = Indicate with an X. Please print legibly.

NAME OF SITE: _____	DATE OF REPORT: _____(y/m/d)
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1. Registered owner(s) of property on which the Majuba Ash Disposal facility is situated:

Name	Telephone	
Postal Address	Fax	
	Postal Code	

2. Operator in control of the Majuba Ash Disposal facility:

Name	Telephone	
Identity number	Tel. After hours	
Educational Qualifications		
Other Relevant competencies:		

3. Indicate the type of waste and approximate quantities of effluent treated during the year:

Type of waste (Specify)	Quantity (m ³ annum ⁻¹)
TOTAL	

4. Indicate the type of waste and approximate quantities of sludge reused, recycled, or disposed of during the year:

Type of waste	Quantity (m ³ annum ⁻¹)	reused, treated or disposed
TOTAL		

I, the undersigned, declare that the information stated above is to my knowledge a true reflection of the status at the _____ ash and rehabilitation dams.

Signature: _____

Name: _____

Capacity: _____

Place: _____ Date _____

MJ S

ANNEXURE III

WATER QUALITY VARIABLES REQUIRED FOR DETECTION MONITORING

Monitor at quarterly intervals for:

Alkalinity (P.Alk)

Ammonia (NH₃-N)

Calcium (Ca)

Chemical Oxygen Demand (COD)

Chloride (Cl)

Chromium (hexavalent) (Cr⁶⁺)

Chromium (Total) (Cr)

Electrical Conductivity (EC)

Fluoride (F)

Magnesium (Mg)

Nitrate (NO₃-N)

pH

Potassium (K)

Sodium (Na)

Sulphate (SO₄)

Total Dissolved Solids (TDS)

WATER QUALITY VARIABLES REQUIRED FOR DETECTION AND INVESTIGATIVE MONITORING

Monitor at annual intervals for:

Alkalinity (P.Alk)

Boron (B)

Cadmium (Cd)

Chemical Oxygen Demand (COD)

Biological Oxygen Demand (BOD)
Chloride (Cl)
Chromium (hexavalent) (Cr⁶⁺)
Chromium (Total) (Cr)
Cyanide (CN)
Electrical Conductivity (EC)
Fluoride (F)
Free and Saline ammonia as N (NH₄-N)
Lead (Pb)
Magnesium (Mg)
Nitrate (NO₃-N)
pH
Phenolic Compounds (Phen)
Potassium (K)
Sodium (Na)
Sulphate (SO₄)
Total Dissolved Solids (TDS)
Total Organic Carbon (TOC)
Total Organic Halogen (TOX)
Volatile Organic Compounds