



## environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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DEA Reference: 14/12/16/3/3/3/217

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Ms Deidre Herbst  
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Megawatt Park  
P.O. Box 1091  
**JOHANNESBURG**  
2000

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Cell: (083) 660 1147  
E-mail: [HerbstDL@eskom.co.za](mailto:HerbstDL@eskom.co.za)

### **PER E-MAIL / MAIL**

Dear Ms Herbst

**APPLICATION FOR INTEGRATED ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 982,983 AND 984 NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 GOVERNMENT NOTICE 921: PROPOSED EXPANSION OF THE ASH DISPOSAL FACILITY AT KRIEL POWER STATION 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, you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's decision in respect of your application as well as the fact that an appeal may be lodged against the decision in terms of the National Appeals Regulations, and the provisions regarding the submission of appeals as contained in the Regulations.

Your attention is drawn to Chapter 2 of Government Notice No. R.993, which prescribes the appeal procedure to be followed. An appellant must submit an 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.

**By post:**  
Private Bag X447,  
Pretoria, 0001; or

**By hand:**  
Environment House  
473 Steve Biko Street,  
Arcadia,  
Pretoria, 0083

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If the applicant wishes to lodge an appeal, it must also serve a copy of the notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection, should you intend to submit an appeal.

**Appeals must be submitted in writing to:**

Mr Z Hassam, Director: Appeals and Legal Review, of this Department at the above mentioned addresses. Mr Hassam can also be contacted at:

Tel: (012) 399 9356

Email: [Appealsdirector@environment.gov.za](mailto:Appealsdirector@environment.gov.za)

Please note that in terms of section 43(7) of the National Environmental Management Act, 1998, an appeal under section 43 of that Act 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.

For guidance on appeals submitted to the Minister in terms of NEMA and the SEMAs, please find a copy of the guideline on the administration of appeals on the Department's website: ([https://www.environment.gov.za/documents/forms#legal authorisations](https://www.environment.gov.za/documents/forms#legal%20authorisations)).

Kindly include a copy of this document with the letter of notification to all registered interested and affected parties.

Yours faithfully

  
**Mr Sabelo Malaza**  
**Chief Director: Integrated Environmental Authorisations**  
**Department of Environmental Affairs**  
Date: 30/03/2018

cc	Mr MW Mkhize	DEDET(Mpumalanga)	Tel:082 447 3561	Email: <a href="mailto:MWKhize@mpg.gov.za">MWKhize@mpg.gov.za</a>
	Erald Nkabinde	eMalahleni Local Municipality	Tel:013 690 6350	Email: <a href="mailto:nkabindeej@emalahleni.gov.za">nkabindeej@emalahleni.gov.za</a>

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## **environmental affairs**

Department:  
Environmental Affairs  
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

**Expansion of Ash Disposal Facility at Kriel Power Station in the Mpumalanga Province**

**Nkangala District Municipality**

<b><i>Authorisation register number:</i></b>	<i>14/12/16/3/3/3/217</i>
<b><i>Last amended:</i></b>	<i>First Issue</i>
<b><i>Holder of integrated authorisation:</i></b>	<i>Eskom Holdings SOC Ltd</i>
<b><i>Location of activities:</i></b>	<i>MPUMALANGA PROVINCE: On Portion 0 of Farm Kriel, Portions 03,15, 19, 30 of Farm Driefontein, and Portions 09, 11/RE, 23 of Farm Onverwacht within eMalahleni 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 –

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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>GN R.327 Item 10:</u>  <i>The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, <b>process water, waste water, return water, industrial discharge or slimes-</b></i></p> <p>(i) <i>with an internal diameter of 0,36 metres or more; or</i></p> <p>(ii) <i>with a peak throughput of <b>120 litres per second</b> or more;</i></p>	<p>The proposed expanded Kriel ash disposal facility would make use of various pipelines to transport process water, waste water, return water and water which contains waste from, or which has been heated in, any industrial or power generation process to and from the ash facility. The transfer dam pump station and pipeline will pump 480m<sup>3</sup>/hr (<b>133.3 litres per second</b>) process and storm water to the AWR dam through a 350mm diameter pipeline.</p> <p><b>Slurry delivery system</b></p> <ul style="list-style-type: none"> <li>• Two 400mm diameter pipes.</li> </ul> <p><b>The decant system pipes consisting of:</b></p> <ul style="list-style-type: none"> <li>• Permanent penstock steel outfall pipes, 10mm thick flanged on top of leachate collection layer of between <b>650mm-750mm diameter</b>; and</li> <li>• Temporary penstock <b>750mm diameter</b>.</li> </ul> <p><b>Ash Deposition System</b></p> <ul style="list-style-type: none"> <li>• Pipeline to ash dam up to <b>500 mm diameter</b>.</li> </ul>
<p><u>GN R.327 Item 12</u>  <i>The development of-</i></p> <p>(i) <i>dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</i></p> <p>(ii) <i>infrastructure or structures with a physical footprint of 100 square metres or more;</i>  <i>where such development occurs-</i></p>	<p>A silt trap and transfer dam is proposed to be constructed in a depression, which could be classified as a watercourse and would thus trigger the activity being infrastructure within a watercourse. There would also be clean and dirty water containment systems, which would constitute canals, channels and retention dams.</p>

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Listed activities	Activity/Project description
<p>(a) within a watercourse;                      (b) in front of a development setback; or                      (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</p>	
<p><u>GN R.327 Item 19</u>                      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 (i)watercourse.</p>	<p>A silt trap and transfer dam would be located in a depression, which could be classified as a watercourse and would thus trigger the activity because more than 5m<sup>3</sup> of material would be infilled and removed within a watercourse.</p>
<p><u>GN R.327 Item 24</u>                      The development of a road-                      (ii) a road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres.                      But excluding a road-                      (c) which is 1 kilometre or shorter.</p>	<p>Internal roads of wider than 8m will be constructed to provide access to the expanded ash disposal facility infrastructure and may be lengthened by more than 1 kilometre.</p>
<p><u>GN R.327 Item 34</u>                      The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding-                      (i) where the facility, infrastructure, process or activity is included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;                      (ii) the expansion of existing facilities or infrastructure for the treatment of effluent,</p>	<p>The expansion of the ash disposal facility will require the amendment of the Air Emissions Licence and Water Use Licence for the facility.</p>

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Listed activities	Activity/Project description
<p>wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day.</p>	
<p><u>GN R.327 Item 46</u>                      The expansion and related operation of infrastructure for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes where the existing infrastructure-</p> <ul style="list-style-type: none"> <li>(i) has an internal diameter of 0,36 metres or more; or</li> <li>(ii) has a peak throughput of 120 litres per second or more; and</li> <li>(a) where the facility or infrastructure is expanded by more than 1 000 metres in length; or</li> <li>(b) where the throughput capacity of the facility or infrastructure will be increased by 10% or more</li> </ul>	<p>the activity triggers the development, operation and expansion of infrastructure (pipeline infrastructure).</p>
<p><u>GN R.327 Item 48 :</u>                      The expansion of-</p> <ul style="list-style-type: none"> <li>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</li> <li>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;</li> </ul> <p>where such expansion occurs-</p> <ul style="list-style-type: none"> <li>(a) within a watercourse; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse.</li> </ul>	<p>The silt trap no.2, transfer dam and permanent effluent trench (channel) is proposed to be constructed in a depression, which could be classified as a watercourse and would thus trigger the activity.</p>
<p><u>GN R.327 Item 56:</u>                      The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre-</p> <ul style="list-style-type: none"> <li>(i) where the existing reserve is wider than 13,5 meters; or</li> </ul>	<p>Internal roads of wider than 8 meters might be lengthened by more than 1km.</p>

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Listed activities	Activity/Project description
(ii) where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas.	
<u>GN R.325 Item 15:</u> The clearance of an area of 20 hectares or more of indigenous vegetation.	The footprint of the proposed expanded ash disposal facility will be approximately 172ha. Of this area it's likely that more than 150 hectares of vegetation be cleared. Of this 150ha it's very likely that more than 20ha of vegetation could cumulatively constitute as natural and thus this activity is triggered. This vegetation mainly consists of natural grasses.
<u>GN R.325 Item 16:</u> 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.	The new starter dam walls are proposed to have a height of 11m (Ash Disposal Dam 4.1) and 11m (Ash Disposal Dam 4.2) respectively. The Ash Water Return dam will have an outer wall height of 17.2m.

The application also includes 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 applied for as follows:

Listed activities	Activity/Project description
<u>GN R.921, Category A (14):</u> The decommissioning of a facility for a waste management activity listed in Category A or B of this Schedule.	The decommissioning of the existing Ash Water Return dam.
<u>GN R.921, Category B (1):</u> The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.	The storage of ash return water in the new Ash Water Return dam.



Listed activities	Activity/Project description
<u>GN R.921, Category B (7):</u> <i>The disposal of any quantity of hazardous waste to land.</i>	The disposal of ash in ash dams
<u>GN R.921, Category B (10)</u> <i>The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).</i>	Activity 1 and 7

as described in the Environmental Impact Report (EIR) dated 10 August 2017 at:

Kriel Ash disposal facility	Latitude	Longitude
Site centre point	26°16'31.86"S	29°12'1.88"E

- for the proposed expansion of Ash Disposal Facility at Kriel Power Station within eMalahleni Local Municipality in the Mpumalanga Province.

The proposed project will entail:

- An additional ash disposal facility that will have sufficient capacity to store ash volumes produced up to 2045 (new);
- An Ash Water Return dam from where decant and drained water will be pumped back to the power station for re-use (new);
- An Ash Water Return Transfer Dam (new);
- Delivery and return infrastructure, including conveyor belts and/ or pipelines, transfer houses, pump stations (existing);
- Clean and dirty water channels (new and existing);
- Power lines (new and existing); and
- Access roads (new and existing)

### 3. SCOPE OF AUTHORISATION

- 3.1. Authorisation is for the proposed expansion of Ash Disposal Facility at Kriel Power Station within eMalahleni Local Municipality 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 **five (05) 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. Commencement with one activity listed in terms of this authorisation constitutes commencement of all authorised activities.
- 3.5. 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.
- 3.6. 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**

- 4.1. 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.
- 4.2. 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.
- 4.3. 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 detailed final development layout map must be submitted to the Department for written approval prior to commencement of the activities. All available biodiversity information must be used in the finalisation of the layout map. Existing infrastructure must be used as far as possible e.g. roads. The site layout plan must indicate the following:
  - 5.1.1. Position of the ash disposal facility and associated infrastructure (coordinates of all infrastructure).
  - 5.1.2. Foundation footprint;
  - 5.1.3. Internal roads indicating width;
  - 5.1.4. Wetlands, drainage lines, rivers, stream and water crossing of the facility's associated infrastructure;
  - 5.1.5. All sensitive features e.g. heritage sites, wetlands, pans and drainage channels that will be affected by the facility and associated infrastructure;
  - 5.1.6. All existing infrastructure on the site, especially roads;
  - 5.1.7. Soil heaps (temporary for topsoil and subsoil and permanently for excess material);
  - 5.1.8. Temporary construction laydown areas;
  - 5.1.9. Buildings, including accommodation; and,
  - 5.1.10. All "no-go" and buffer areas.; and
  - 5.1.11. A map combining the final layout plan superimposed (overlain) on the environmental sensitivity map.
- 5.2. The Environmental Management Programme (EMPr) integrated as part of the Application for EA is hereby approved. This EMPr must be implemented and adhered to.
- 5.3. The approved EMPr and operational EMPr for the Kriel Ash Disposal facility 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.

- 5.4. Changes to the EMPr and the operational EMPr for the Kriel ash disposal facility which are environmentally defensible, must be submitted to this Department for acceptance before such changes could be effected.
  - 5.5. The Department reserves the right to request amendments to the EMPr and the operational EMPr for the Kriel Ash Disposal facility should any impacts that were not anticipated or covered in the EIR be discovered.
  - 5.6. The provisions of the approved EMPr and the operation EMPr for the Kriel Ash Disposal facility including the mitigation measures identified in the EIR and specialist' studies shall be an extension of the conditions of this EA and therefore noncompliance with them would constitute noncompliance with the EA.
  - 5.7. The Kriel Ash Disposal facility must be managed and operated:
  - 5.8. In accordance with an Environmental Management System (EMS), that inter alia identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the holder of the environmental authorisation as a result of complaints;
  - 5.9. By sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
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

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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 Kriel Ash Disposal facility.
- 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 holdership 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 DISPOSAL FACILITY**

17.1. Site Security and Access Control

- 17.1.1. The holder of the environmental authorisation must ensure effective access control to the centralised sewage treatment plant 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. The holder of environmental authorisation must ensure that only waste classified in accordance to Regulation 634, National Environmental Management: Waste Act, 2008: Waste Classification and Management Regulations, dated 23 August 2013 may be disposed of at the proposed Ash Disposal Facility.
- 17.2.2. The site or any portion thereof may only be used for the disposal of permissible waste (Ash in Class C) if the Site or any such portion has been constructed or developed according to the conditions listed under condition 17.3.

17.3. Construction requirements

- 17.3.1 Construction of the proposed ash disposal facility, pollution control dams and associated infrastructure shall adhere to class C barrier liner in accordance with Regulation 636 National Norms and Standards for disposal of waste on landfill dated 23 August 2013 and shall be carried under the supervision of a registered professional Engineering Profession Act, 2000 (Act 46 of 2000). The design drawings must be approved in writing by the Responsible Authority before construction and disposal may commence.

- 17.3.3. The holder of environmental authorisation must ensure that Construction Quality Assurance (CQA) takes place during construction, all construction material must comply with relevant South African National Specifications, or any prescribed management practice or standards which ensure equivalent performance. Details of quality assurance during construction must be provided; this must also include confirmation that construction will be supervised by a Registered Professional Engineer.
- 17.3.4. After construction of the Site or further development within the Site, the holder of environmental authorisation must notify the Responsible Authority thereof and the person referred to in condition 17.3.6 shall submit a certificate or alternatively a letter to the Responsible Authority that the construction of the Site or further development within the Site, as proposed by the holder of environmental authorisation and approved by the Responsible Authority, is in accordance with recognised civil engineering practice and the requirements in this Licence, before disposal may commence on the Site. If the Responsible Authority is satisfied with the construction of the Site or any further development within the Site and has given permission, the Licence Holder may use the Site or any further development within the Site for the disposal of waste.
- 17.3.5. Works must be constructed and maintained on a continuous basis by the holder of environmental authorisation to divert and drain from the working face of the Site, all runoff water arising on the Site, which could be expected as a result of the estimated maximum precipitation and to prevent such runoff water from coming into contact with leachate from the Site. Such works must, under the said rainfall event, maintain a freeboard of 0.8 metre and be lined to the satisfaction of the Responsible Authority.
- 17.3.6. Runoff water must comply with the quality requirements as prescribed by the Responsible Authority which may be determined from time to time and shall be drained from the Site in a legal manner.
- 17.3.7. Runoff water referred to in condition 17.3.5 which does not comply with the quality requirements and leachate from the Site shall, by means of works which shall be constructed and maintained on a continuous basis by the holder of environmental authorisation and be lined as approved by the Responsible Authority, to prevent pollution to groundwater-
- a) be treated to comply with the quality requirements and discharged in a legal manner and/  
or
  - b) be evaporated in lined dams and/or
  - c) be discharged into any convenient sewer if accepted by the Authority in control of that sewer.

- 17.3.8. The holder of environmental authorisation shall take reasonable steps to ensure that all storage facility and drainage system linked to the ash disposal facility are constructed and maintained on a continuous basis and be lined as approved by the Responsible Authority.
- 17.3.9. The Slope of the Site shall be constructed in such a manner that little or no erosion occurs and ensures that no damming is occurring.
- 17.3.10. Any development which occurs within 1:100 year flood line and/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 36 of 1998).
- 17.3.11. The ash disposal facility, pollution control dams or any effluent storage facility should not be constructed on geological features such as lineaments, dykes, fault zone or shallow water table or on areas with the potential for increased infiltration to groundwater and also not constructed using carbonaceous (carbon-containing rock) materials.
- 17.3.12. 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. Water quality management
- 17.4.1. Stormwater Management:
- (i) Uncontaminated runoff water must under no circumstances be used to dilute leachate emanating from the Site.
  - (ii) The energy dissipaters, litter traps and sediment traps must be installed in the stormwater channels to reduce velocity of the stormwater.
- 17.5. Monitoring
- 17.5.1. Ground water Monitoring:
- (i) The holder of environmental authorisation must implement and maintain the monitoring program referred to in Section 10 page 7 of the Geohydrological Evaluation for the impact Assessment Report compiled by Aurecon dated November 2016.
  - (ii) 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.
  - (iii) A geophysical survey should be conducted prior to siting and drilling of additional groundwater monitoring boreholes in an effect to optimise drilling positions and to delineate the structural geological features which could act as preferential groundwater flow pathways.

- (iv) Water quality Monitoring should be constructed for inorganic and organic parameters as reflected on page 72 of the Geohydrological Evaluation for the impact Assessment Report dated November 2016.
- (v) In the event that the groundwater and downstream users are affected by migration of pollution from the ash dam facility, the holder of environmental authorisation should compensate the user with potable water.
- (vi) All the monitoring boreholes must always be locked with caps in an effort to prevent pollution, accidental or wilful interference with the boreholes which impact on the results of the samples.
- (vii) The ash dam facility must be operated and maintained effectively to prevent any spillage or polluted water into the groundwater system and down-gradient streams.
- (viii) The holder of environmental authorisation should at all times adhere to protection measures that adequately address any forms of water pollution (surface and groundwater).

17.5.2. Surface Water Monitoring:

- (i) If, in the opinion of Responsible Authority pollution of ground water, surface water or both occurred on site or area, the holder of environmental authorisation may be required to monitor additional variables on a frequency which will be determined by the Responsible Authority.
- (ii) The holder of environmental authorisation must ensure that Surface water monitoring points for all the identified water resources within the hydrocensus Site must be done in consultation with the Responsible Authority.

17.5.3. Background and Detection monitoring:

Groundwater and surface water quality monitoring must be conducted;

- (i) for variables listed in Annexure II- quarterly.
- (ii) or such frequency as may be determined by the Responsible Authority.

17.5.4. Linear Leak and Failure detection monitoring:

- (i) The leak detection system must be monitored on a daily basis for possible leakages. Should a leak or failure be suspected or detected during monitoring or at any time, it must be regarded as an incident according to condition 17.6 below and be addressed to the satisfaction of the Responsible Authority.
- (ii) 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 action shall be performed to the satisfaction of the Responsible Authority.

17.6. Investigation monitoring

17.6.1. If, in the opinion of the Responsibility Authority, a water quality variable listed Annexure III shows an increasing trend, the holder of environmental authorisation shall initiate a monthly monitoring programme until such time that the parameter of concern is within the acceptance limit and submit a mitigation plan to the Responsible Authority.

17.7. Method of analysis

- (i) The holder of environmental authorisation shall carry out all test in accordance with methods prescribed by and obtained from the South African Bureau of Standards (SABS), referred to in the Standards Act, 2008 (Act 08 of 2008), to analyse the samples taken under the monitoring programmes specified in condition 17.5.
- (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.

17.8. Auditing

17.8.1. 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.

17.9. Reporting

17.9.1. Reporting of incidents:

- (i) The holder of environmental authorisation must, within 24 hours, notify the Responsible Authority 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 17.6.1., 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 Licence Holder.
- 17.9.2. Other reports
- 17.9.3. The information required in terms of condition 17.5 must be reported to the Responsible Authority in an annual report. The information must also be included into a trend report, which must contain a graphic presentation of all results obtained previously at any specific point, as well as an interpretation and discussion of the results of each monitoring occasion.
- 17.9.4. 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.
- 18. Operational Requirements**
- 18.1. Waste which is not permissible on Site, must be dealt with according to relevant legislation or the Departments policies and practices.
- 18.2. The holder of environmental authorisation must prevent the occurrence of nuisance conditions or health hazards
- 18.3. The holder of environmental authorisation must ensure that all personnel who work with hazardous waste are trained to deal with these potential hazardous situations so as to minimise the risks involved. Records of training and verification of competence must be kept by the Licence Holder.
- 18.4. The holder of environmental authorisation must ensure that the recovery facility is operated within its design parameters at all times.
- 18.5. The holder of environmental authorisation must maintain and implement an emergency preparedness plan and review it annually after each emergency incident and major accident and major accident. The plan must amongst others, include measures to address:
- (i) Site fires;
  - (ii) Spillages (on site)

- (iii) Natural disasters such as floods
- 18.6. The holder of environmental authorisation must prevent spillages on site; where they happen nonetheless the holder of environmental authorisation must ensure effective and safe cleaning of such spillages in accordance with the emergency preparedness plan.
- 18.7. The holder of environmental authorisation must ensure that the ash and slag is disposed at a registered hazardous waste landfill site.
- 18.8. The holder of environmental authorisation must retain records of appropriate safety disposal certificates associated with hazardous waste removal, transportation and disposal.
- 18.9. The holder of environmental authorisation must ensure that waste that cannot be recovered or treated on site must be sent to a licenced waste management facility.
- 18.10. The holder of environmental authorisation must ensure that the storage of waste comply with the Norms and Standards GNR 926 of 29 November 2013.
- 18.11. All conditions related to listed activities in terms of GNR 921 are valid for a period of ten (10) years from the date of signature of this authorisation. The holder of authorisation, in consultation with the Department, must initiate a review every five (05) years from the date of issue, or at any time before or after that date. It is the responsibility of the Holder of this authorisation to ensure that the Department is notified six (06) months prior the lapsing of the intended review period. Based on the results of the review, especially compliance to conditions contained herein or recommendations from the audit reports and/or changing legislation, the authorisation could be amended or withdrawn, or the validity thereof reduced or extended

Date of environmental authorisation: 30/03/2018

  
Mr Sabelo Malaza  
Chief Director: Integrated Environmental Authorisations  
Department of Environmental Affairs

## 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 10 August 2017;
- b) The mitigation measures included in the EIR dated 10 August 2017 and the EMPr;
- c) The information contained in the specialist studies contained within EIR dated 10 August 2017;
- d) The comments received from the Directorate: Authorisations & Waste Management Licensing and comments from interested and affected parties as included in the EAIR dated 10 August 2017; 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 10 August 2017 and sufficient assessment of the key identified issues and impacts have been completed.
- b) The proposed project is for expansion of an existing Kriel Ash Disposal Facility in order to construct the additional ash disposal facility before the existing ash dams reach their limiting Rate of Rise in 2021.
- c) The development does not occur within 30m of any natural wetland resources.
- d) The procedure followed for impact assessment is adequate for the decision-making process.
- e) The proposed mitigation of impacts identified and assessed adequately curtails the identified impacts.
- f) 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 Kriel Ash Disposal facility is situated:**

Name	Telephone	
Postal Address	Fax	
	Postal Code	

**2. Operator in control of the Kriel 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 <sup>3</sup> annum <sup>-1</sup> )
<b>TOTAL</b>	

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

Type of waste	Quantity (m <sup>3</sup> annum <sup>-1</sup> )	reused, treated or disposed
<b>TOTAL</b>		

I, the undersigned, declare that the information stated above is to my knowledge a true reflection of the status at the \_\_\_\_\_ effluent treatment facility.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Capacity: \_\_\_\_\_

Place: \_\_\_\_\_ Date \_\_\_\_\_

*MS*

### ANNEXURE III

#### WATER QUALITY VARIABLES REQUIRED FOR DETECTION MONITORING

Monitor at quarterly intervals for:

Alkalinity (P.AIk)

Ammonia (NH<sub>3</sub>-N)

Calcium (Ca)

Chemical Oxygen Demand (COD)

Chloride (Cl)

Chromium (hexavalent) (Cr<sup>6+</sup>)

Chromium (Total) (Cr)

Electrical Conductivity (EC)

Fluoride (F)

Magnesium (Mg)

Nitrate (NO<sub>3</sub>-N)

pH

Potassium (K)

Sodium (Na)

Sulphate (SO<sub>4</sub>)

Total Dissolved Solids (TDS)

#### WATER QUALITY VARIABLES REQUIRED FOR DETECTION AND INVESTIGATIVE MONITORING

Monitor at annual intervals for:

Alkalinity (P.AIk)

Boron (B)

Cadmium (Cd)

Chemical Oxygen Demand (COD)

Biological Oxygen Demand (BOD)

Chloride (Cl)

Chromium (hexavalent) (Cr<sup>6+</sup>)

Chromium (Total) (Cr)

Cyanide (CN)

Electrical Conductivity (EC)

Fluoride (F)

Free and Saline ammonia as N (NH<sub>4</sub>-N)

Lead (Pb)

Magnesium (Mg)

Nitrate (NO<sub>3</sub>-N)

pH

Phenolic Compounds (Phen)

Potassium (K)

Sodium (Na)

Sulphate (SO<sub>4</sub>)

Total Dissolved Solids (TDS)

Total Organic Carbon (TOC)

Total Organic Halogen (TOX)

Volatile Organic Compounds