

Application for Amendment of Environmental Authorisation



environmental affairs

Department
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Application for amendment of an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations 2014

Kindly note that:

- 1 This form must be used to apply for the amendment of an environmental authorisation. An amendment includes
 - a) adding, substituting, removing or changing a condition or requirement of an environmental authorisation, or
 - b) updating or changing any details or correcting a technical error
2. This form is current as of 08 December 2014. It is the responsibility of the Applicant / EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
3. The required information must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. It is in the form of a table that can extend itself as each space is filled with typing.
4. Incomplete applications may be rejected or returned to the applicant for amendment.
5. The use of "not applicable" in the form must be done with circumspection. Where it is used in respect of material information that is required by the competent authority for assessing the application, this may result in the rejection of the application as provided for in the regulations.
6. **No faxed or e-mailed applications will be accepted.**
7. Unless protected by law, all information contained in and attached to this application, will become public information on receipt by the competent authority. Upon request during any stage of the application process, the applicant / EAP must provide any registered interested and affected party with the information contained in and attached to this application.
8. This form must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Should the application form and attached reports not be submitted to the addresses given below it will be rejected.
9. Proof of payment of the prescribed fee of R2000 must accompany the submission of this form, unless an exclusion applies (see section 1 below). The application will not be processed without proof of payment unless one of the exclusions provided for in the fee Regulations is applicable AND such information in the exclusion section of this application form has been confirmed by this Department.

Application for Amendment of Environmental Authorisation

DEPARTMENTAL DETAILS

Postal address:

Department of Environmental Affairs
Attention Director Integrated Environmental Authorisations

Private Bag X447
Pretoria
0001

Physical address

Department of Environmental Affairs
Attention Director Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia
Pretoria

Queries must be directed to the Directorate Integrated Environmental Authorisations at
Tel: (012) 399-9372 Email: EIAAdmin@environment.gov.za

*Please note that this form must be copied to the relevant provincial environmental department(s)
View the Department's website at <http://www.environment.gov.za/> for the latest version of the documents.*

Application for Amendment of Environmental Authorisation

1. PROOF OF PAYMENT

Applicants are required to tick the appropriate box below to indicate that either proof of payment is attached or that, in the applicant's view, an exclusion applies. Proof and a motivation for exclusions must be attached as Appendix 1 of this application form.

Proof of payment attached as Appendix 1

Exclusion applies

An applicant is excluded from paying fees if

- The activity is a community based project funded by a government grant, or
- The applicant is an organ of state

TYPE OF EXCLUSION	Tick where applicable Proper motivation must be attached to the application
The activity is a community based project funded by a government grant	
The applicant is an organ of state	√

Department of Environmental Affairs' details for the payment of application fees

Payment Enquiries Tel: 012 399 9119 Email: eiafee@environment.gov.za
Banking details ABSA Bank Branch code: 632005 Account number: 1044 2400 72 Current account Reference number: . (application reference number to be used)
Proof of payment must accompany the application form.
Tax exemption status Status: Tax exempted

Application for Amendment of Environmental Authorisation

2. APPLICATION DETAILS

Name of person to whom the environmental authorisation was issued	Mr. Velaphi Ntuli Eskom Holdings SOC Ltd.		
Contact person	Mr. Velaphi Ntuli		
Postal address	Private Bag X10 Kernkrag		
	Postal code	7440	
Telephone	021 685 7105	Cell	
E-mail	ntuliv@eskom.co.za	Fax	
	RamaruTA@eskom.co.za		
Environmental Assessment Practitioner (EAP)	NCC Environmental Services (Pty) Ltd		
Contact person	Nicholas Gates		
Postal address	26 Bell Close, Westlake Business Park, Westlake Cape Town		
	Postal code	7945	
Telephone	021 702 2884	Cell	073 1998 431
E-mail	nickg@ncc-group.co.za	Fax	
EAP Qualifications	B Soc Sci (Environmental and Geographical Sciences)		
EAP Registrations/Associations	IAIAsa – No. 5535 IWMSA – No. 30116139		
Name of landowner if the person to whom the environmental authorisation has been issued is not the owner	NA		
Contact person			
Postal address			
	Postal code		
Telephone		Cell	
E-mail		Fax	
	In instances where there is more than one landowner, please attach a list of landowners with their contact details to the back of this page, together with copies of the notices given to these landowners about the amendment application		
Project Description	Construction of a used fuel Transient Interim Storage Facility (TSIF) at Koeberg Nuclear Power Station, Western Cape Province		
Farm name, Erf No., portion etc	Cape Farm Duynefontein No. 1552		
Physical address where authorised activity is taking or will take place	Koeberg Nuclear Power Station, R27 (West Coast Road)		
Magisterial District or Town	Cape Town		

Application for Amendment of Environmental Authorisation

Departmental reference number of the previous environmental authorisation in respect of which an amendment is applied for	17/12/19/3/3/947
Date of issue of environmental authorisation	17/05/2017
Activity/ies for which authorisation was granted	<p><i>Page 3</i></p> <p>GN R. 984 Item 27 <i>Construction of the TISF will require clearing of more than 1 ha of indigenous vegetation.</i></p> <p>GN R. 984 Item 3 <i>The proposed TISF will be used to temporarily store used nuclear fuel.</i></p> <p>GN R. 985 Item 12 <i>The site of the proposed TISF is located within the Western Strandveld Bioregion.</i> <i>The vegetation type is Cape Flat Dune Strandveld, which is listed as Endangered in the region. More than 300 square meters will be cleared for the construction of the TISF.</i></p>
Please Note: A certified copy of the environmental authorisation must be attached to this application as Appendix 2.	

3. DETAILS OF IMPLEMENTATION OF PREVIOUS ENVIRONMENTAL AUTHORISATION

Was the activity commenced with during the validity period of the environmental authorisation? If yes, please describe the implementation of the previous environmental authorisation to date		NO
The Activity has not yet commenced		

4. AMENDMENTS APPLIED FOR AND RELATED INFORMATION

Please indicate which of the following is relevant

4.1 The holder of an environmental authorisation may at any time apply to the relevant competent authority for the amendment of the authorisation if

(a) there is a material change in the circumstances which existed at the time of the granting of the environmental authorisation,		NO
(b) there has been a change of ownership in the property and transfer of rights and obligations must be provided for, or		NO
(c) any detail contained in the environmental authorisation must be amended, added, substituted, corrected, removed or updated.	YES	

4.2 Describe the amendments that are being applied for

Amendment 1.

Application for Amendment of Environmental Authorisation
 Need an editorial change Page 3 of the Environmental Authorisation.

Reference of Listing notices incorrect in the Environmental Authorisation (EA):

The EA states on page 3 under Activities Authorised:

GN R. 984 Activity 27: *The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—*
 (i) *the undertaking of a linear activity, or*
 (ii) *maintenance purposes undertaken in accordance with a maintenance management plan*

GN R. 985 Activity 3: *The development and related operation of facilities or infrastructure for nuclear reaction including energy generation, the production, enrichment, processing, reprocessing, storage or disposal of nuclear fuels, radioactive products, nuclear waste or radioactive waste*

The correct referencing should read as per GN R. 983 (Pg. 15 of 26) and GN R. 984 (Pg. 7 of 11):

~~GN R. 984~~ **GN R. 983 (Listing Notice 1) Activity 27:** *The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—*
 (i) *the undertaking of a linear activity, or*
 (ii) *maintenance purposes undertaken in accordance with a maintenance management plan*

~~GN R. 985~~ **GN R. 984 (Listing Notice 2) Activity 3:** *The development and related operation of facilities or infrastructure for nuclear reaction including energy generation, the production, enrichment, processing, reprocessing, storage or disposal of nuclear fuels, radioactive products, nuclear waste or radioactive waste*

Amendment 2:

Page 3 and Page 4, Activities Authorised, of the EA includes Description of Activities, including a table of listed activities, incorrectly referenced activity (as stated above)

Listed Activity	Activity / project description
GN R 985 Item 3 The Development and related operation of facility or infrastructure for nuclear reaction including energy generation, the production, enrichment, processing, reprocessing, storage or disposal of nuclear fuels, radioactive , products, Nuclear waste or radioactive waste.	The proposed TISF will be used to temporarily store used nuclear fuel

GN R 985 Item 3 refers to the proposed TISF as being used to temporarily store used nuclear fuel. The Licence Holder is requesting to include for the temporary storage of the six original steam generators (OSGs) in the TISF and be included in the EA. The OSGs are classified as low and intermediate level radioactive waste
 The OSGs will be temporary stored in the TISF once construction is completed prior to being transported to the Northern Cape for safe disposal at Vaalputs National Radioactive Waste Disposal Facility once all transportation logistics have been finalised.
 After which the facility will be utilized for the temporary storage of used nuclear fuel
 The shielding will be removed once all indicated waste is removed from the facility The shielding will be placed in the Low Level Waste building on Koeberg Nuclear Site

Proposed amendments

Listed Activity	Activity / project description
GN R 984 Item 3 The Development and related operation of facility or infrastructure for nuclear reaction including energy generation, the production, enrichment, processing, reprocessing, storage or disposal of nuclear fuels, radioactive , products, Nuclear waste or radioactive waste.	The proposed TISF will be used to temporarily store used nuclear fuel, as well as the temporary storage of the six original steam generators. Shielding will be erected for the protection of personnel on site, from the emission of radiation by the Steam Generators and casks The shielding will then be dismantled once all indicated waste has been permanently removed.

Application for Amendment of Environmental Authorisation

4.3 Please provide the reasons and/or a motivation for the application for amendment
Amendment 1: To ensure for correcting referencing
Amendment 2: The surface area of the storage facility will not be increased in anyway or form, however additional walls and a roof will be constructed for the shielding of the original steam generators (OSGs) Although radioactive in nature the radioactive waste classification of the six OSG's is lower than that of the casks which will be stored there Incorporating shielding into the design is a National Nuclear Regulator (NNR) requirement Please see attached Technical Report for further information, along with a diagram of the structure.

4.4 Should the amendment being requested result due to 4.1 (b) above, you are requested to furnish the Department with a written undertaking that the new holder of the environmental authorisation is willing and able to assume responsibility of the environmental authorisation issued. Provide a short motivation and explanation below
Not Applicable

5. ENVIRONMENTAL IMPACTS

5.1. Describe any negative environmental impacts that may occur if the application for amendment is granted, amongst others information on any increases in air emissions, waste generation, discharges to water and impacts of the natural or cultural environment must be included
Amendment 1 & 2: There will be no additional negative impacts

5.2 Describe any negative environmental impacts that may occur if the application for amendment is not granted.
Amendment 2: Apart from the TISF facility there are two alternatives. The first alternative is to construct new storage to temporarily store the OSGs which will lead to losses of biodiversity as the new area will have to be identified and vegetation will be cleared. The second alternative is to temporary store in an existing Low Level Waste (LLW) storage facility. The LLW currently does not have the necessary storage space available and poses too much risk to the project to be considered feasible at this stage.

5.3 Describe any positive environmental impacts that may occur if the application for amendment is granted, amongst others information on any reduction in the ecological footprint, air emissions, waste generation and discharges to water must be included.
Amendment 2: Responsible temporary storage of radioactive material/components prior to final disposal and avoiding the need to clear additional vegetation for the construction of new facilities especially to accommodate the OSG's temporarily

Application for Amendment of Environmental Authorisation

6. AUTHORISATION FROM OTHER GOVERNMENT DEPARTMENTS

6.1. Are any permission, licenses or other authorisations required from any other departments before the requested amendments can be effected?		NO
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If yes, please complete the table below.

Name of department and contact person	Authorisation required	Authorisation applied for (Yes/ No)

Application for Amendment of Environmental Authorisation

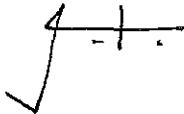
7. RIGHTS OR INTERESTS OF OTHER PARTIES

In your opinion, will this proposed amendment adversely affect the rights and interests of other parties?		NO
The temporary storage of OSGs in the TISF facility will not introduce any new adverse socio-environmental impacts.		

NOTE: The Department is entitled to request further information if it believes it is necessary for the consideration of the application. If the application is for a substantive amendment or if the rights or interests of other parties are likely to be adversely affected, the Department will instruct the applicant to conduct a public participation process and to conduct any investigations and assessments that it deems necessary.

8. DECLARATION:

I, **Mr. Velaphi Ntuli**, declare that I will comply with all my legal obligations in terms of this application and provide accurate information to everyone concerned in respect to this application.



Signature of the applicant:

Name of company or organisation: **ESKOM Holdings SOC Limited**

Date: **02nd October 2018**

Application for Amendment of Environmental Authorisation

**APPENDIX 1
PROOF OF PAYMENT/ MOTIVATION FOR EXCLUSION**

Application for Amendment of Environmental Authorisation



Department of Environmental Affairs
Attention: Director: Integrated Environmental Authorisations
Environment House
473 Steve Biko Road
Arcadia
Pretoria

Yes.
No
Yes.
5 September 2018 15:30
Christiaan P. van der Merwe
Staff Supervisor

To whom it may concern,

This serves to indicate that Eskom Holdings SOC Ltd. is currently the holder of the Environmental Authorisation for which amendments are required.

Eskom Holdings SOC Ltd. is a Stated Owned Company/Organ of State and therefore forms part of the Applicants whom are excluded from having to pay any fees.

As indicated in Section of the Amendment Application form:

An applicant is excluded from paying fees if:

- The activity is a community based project funded by a government grant; or
- The applicant is an organ of state.

Velaphi Ntuli
GENERAL MANAGER (KOEBERG NUCLEAR POWER STATION)

Koeberg Operating Unit
R27 off West Coast Road
Melkbosstrand SA

Private Bag X10
Kernkrag
7440
SA

Tel: +27 21 522 1200
Fax: +86 566 5824
www.eskom.co.za



Application for Amendment of Environmental Authorisation

APPENDIX 2
CERTIFIED COPY OF ENVIRONMENTAL AUTHORISATION

15 August 2018

Attention: Director: Integrated Environmental Authorisations

Department of Environmental Affairs

Private Bag X 447

Pretoria

0001

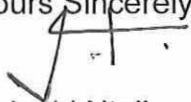
To The Director: Integrated Environmental Authorisations

Certification of Environmental Authorization

As holders of the Environmental Authorisation (EA), Ref. No. 14/12/16/3/3/2/947/AM/1, ESKOM Holdings SOC Ltd would like to bring to the Departments attention that it is unable to provide an original certified copy of the EA, however a copy of the said document is available. This has therefore resulted in the delay of the acceptance of an application for the amendment of the EA due to the Department requirements of an original certified copy.

ESKOM is requesting that the Department advise on the most appropriate steps going forward in able to ensure that all the necessary documentations which are required can be provided.

Yours Sincerely



Velaphi Ntuli

General Manager,

ESKOM: Koeberg Operating Unit

R27 West Coast Road Melkbosstrand

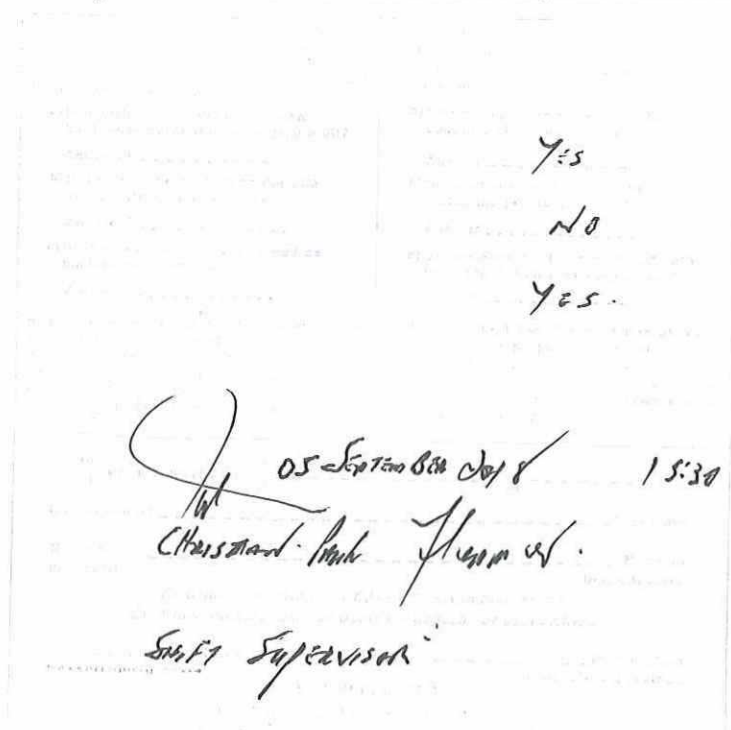
Western Cape

Private Bag X10

Kernkrag

7440

Tel: 021 522 1200 Fax: 086 566 5824



15 August 2018

Attention: Director: Integrated Environmental Authorisations
Department of Environmental Affairs
Private Bag X 447
Pretoria
0001

To The Director: Integrated Environmental Authorisations

Certification of Environmental Authorization

I, Velpahi Ntuli, ID. No. 7511215560086 _____ **ESKOM Holdings SOC Ltd**, hereby declare under oath that the current copy of the Environmental Authorisation, Ref. Number 14/12/16/3/3/2/947/AM/1, is the only available copy and true and correct in nature.

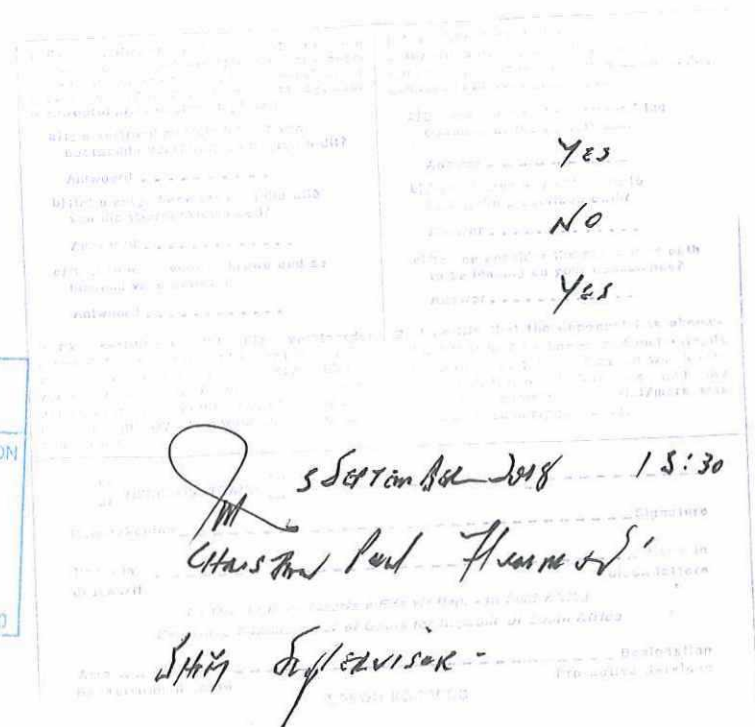
This letter serves as notification that as the Licence Holder, Eskom is unable to retrieve an original copy of Environmental Authorisation (EA) 14/12/16/3/3/2/947/AM/1, and currently only in possession of a copy. These resulted to the uncertified copy being submitted with the completed EA amendment application form.


Velphi Ntuli

General Manager,
ESKOM: Koeberg Operating Unit
R27 Off West Coast Road
Melkbosstrand
Western Cape

Private Bag X10
Kernkrug
7440

Tel: 021 522 1200
Fax: 086 566 5824



Handwritten notes and signatures on a document. Includes "5 Section 208 2018 15:30", "Signature: Chris Paul Thorne", and "Siting Supervisor".



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Private Bag X 447 · PRETORIA · 0001 · Environment House · 473 Steve Biko Road, Arcadia · PRETORIA
Tel (+ 27 12) 399 9372

DEA Reference: 14/12/16/3/3/2/947

Enquiries: Ms Portia Makilla

Telephone: 012-399-9411 E-mail: pmakilla@environment.gov.za

Mr Velaphi Ntuli
Eskom Holdings SOC Ltd
P O Box 1091
JOHANNESBURG
2000

Tel: 021 685 7105
E-mail: ntuliv@eskom.co.za

PER E-MAIL / MAIL

Dear Mr Ntuli

ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998: GN R. 982/983/984/985: CONSTRUCTION OF A USED FUEL TRANSIENT INTERIM STORAGE FACILITY AT KOEBERG NUCLEAR POWER STATION, WESTERN CAPE 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.

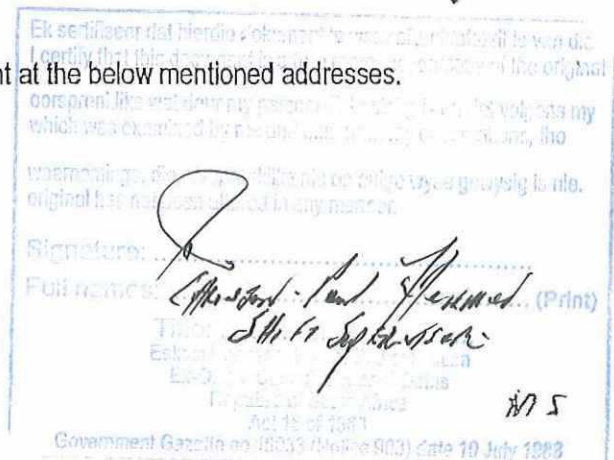
In terms of Regulation 4(2) of the Environmental Impact Assessment Regulations, 2014 (the Regulations), you are instructed to notify all registered interested and affected parties, in writing and within 14 (fourteen) days of the date of the EA, of the Department's decision in respect of your application 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.

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:

Mr Z Hassam, Director: Appeals and Legal Review of this Department at the below mentioned addresses.

By email: appealsdirector@environment.gov.za



J.H.

1875

By hand: Environment House
473 Steve Biko Road,
Arcadia,
Pretoria, or

By post Private Bag X447,
Pretoria,
0001

Please note that in terms of Section 43(7) of the National Environmental Management Act, 1998, 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 appealsdirector@environment.gov.za.

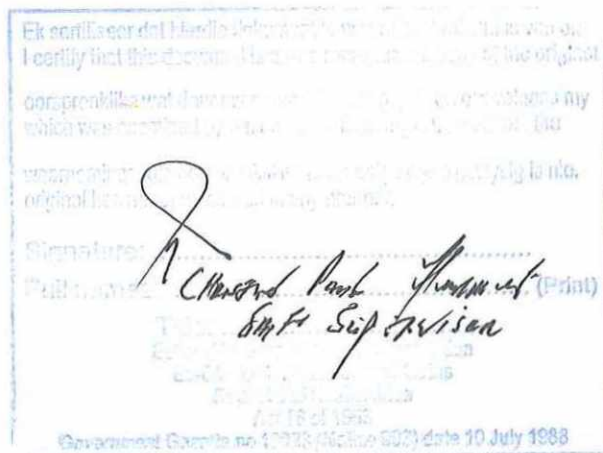
Yours faithfully



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

Date: 19/05/2017

CC:	Sharon Jones	SRK Consulting Pty Ltd	Tel: 021 685 7105	Email: sjones@srk.co.za
	Adri La Meyer	WC DEADP	Tel: 021 659 3060	Email: adri.lameyer@westerncape.gov.c.za





environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Environmental Authorisation

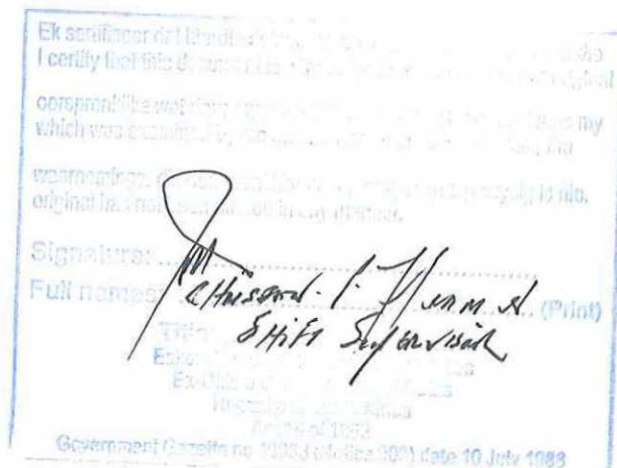
In terms of regulation 25 of the Environmental Impact Assessment Regulations, 2014

Construction of a used fuel Transient Interim Storage Facility at Koeberg Nuclear Power Station,
Western Cape Province

City of Cape Town

Authorisation register number:	14/12/16/3/3/2/947
Last amended:	First issue
Holder of authorisation:	ESKOM HOLDINGS SOC LTD
Location of activity:	WESTERN CAPE PROVINCE

This environmental 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.



✓

Decision

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this environmental authorisation, that the applicant should be authorised to undertake the activities specified below.

Non-compliance with a condition of this environmental authorisation may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the EIA Regulations, 2014.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

Activities authorised

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No.107 of 1998) and the Environmental Impact Assessment Regulations, 2014 the Department hereby authorises –

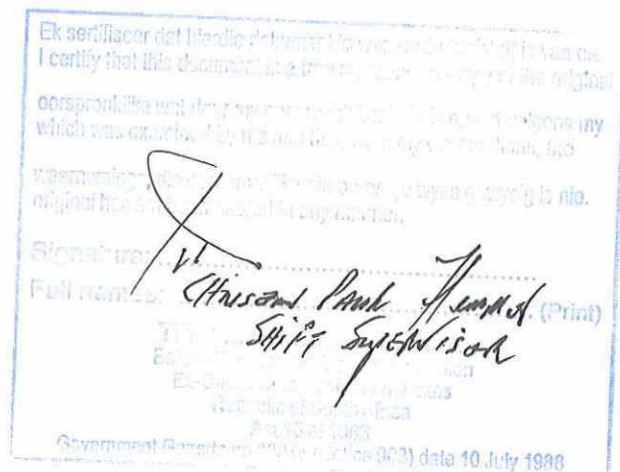
ESKOM HOLDINGS SOC LTD

(hereafter referred to as the holder of the authorisation)

with the following contact details –

Mr Velaphi Ntuli
Eskom Holdings SOC Ltd
P O Box 1091
JOHANNESBURG
2000

Tel: 021 685 7105
E-mail: ntuliv@eskom.co.za



Handwritten initials/signature
MS

to undertake the following activities (hereafter referred to as "the activity") indicated in Listing Notice 1 (GN R. 984 & 985):

Listed activities	Activity/Project description
<p><u>GN R. 984 Item 27:</u></p> <p>(i) The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation except where such clearance of indigenous vegetation is required for-</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>Construction of the TISF will require clearing of more than 1 ha of indigenous vegetation.</p>
<p><u>GN R. 985 Item 3:</u></p> <p>The development and related operation of facilities or infrastructure for nuclear reaction including energy generation, the production, enrichment, processing, reprocessing, storage or disposal of nuclear fuels, radioactive products, nuclear waste or radioactive waste.</p>	<p>The proposed TISF will be used to temporarily store used nuclear fuel.</p>
<p><u>GN R. 985 Item 12:</u></p> <p>The clearance of an area of 300 square metres or more of indigenous vegetation except (a) In Western Cape Province: i. Within any critically endangered or endangered where such clearance of ecosystem listed in terms of section 52 of the NEMBA or indigenous vegetation is prior to the publication of such a list, within an area that is required for maintenance has been identified as critically endangered in the purposes undertaken in National Spatial Biodiversity Assessment 2004; accordance with a maintenance ii. Within critical biodiversity areas identified in bioregional management plan. iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; or iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.</p>	<p>The site of the proposed TISF is located within the Western Strandveld Bioregion. The vegetation type is Cape Flat Dune Strandveld, which is listed as Endangered in the region. More than 300 square meters will be cleared for the construction of the TISF.</p>



EK sertifiseer dat die inligting verskaf is korrek is en dat ek verklaar dat ek hierdie dokument slegs vir die gebruik van die oorspronklike dokument gebruik het en dat ek nie 'n kopie daarvan sal verskaf nie.

I certify that this document is only for the use of the original document and that I will not provide a copy of it.

Handwritten signature: *Chrisford P... (Print)*
Staff Supervisor

Handwritten initials: *JF*
M:

as described in the Environmental Impact Assessment Report (EIAR) dated February 2017 at:

Farm Name: Cape Farm Duynefontein No. 1552

21 Digit SG code:

C	0	1	6	0	0	0	0	0	0	0	0	1	5	5	2	0	0	0	0	0
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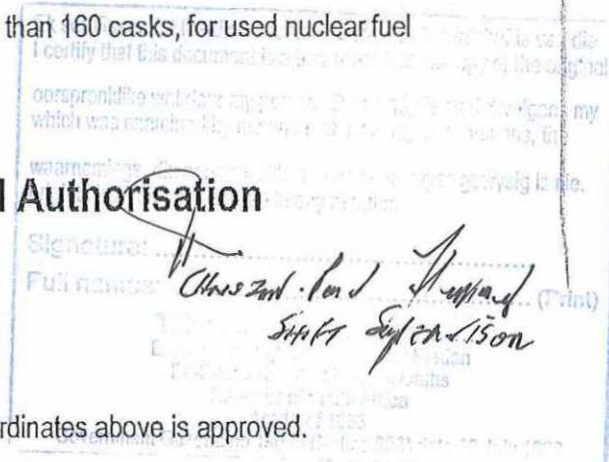
Storage facility	Latitude	Longitude
	33°40'22.78"S;	18°25'48.76"E

- for the construction of used fuel transient interim storage facility (TISF) at Koeberg Nuclear Power Station (KNPS), Farm Duynefontein 1552 in the Western Cape Province, hereafter referred to as "the property".

The proposed TISF will comprise of a concrete pad(s) within a site footprint of approximately 1.28 ha (12 800 m²) and will be designed to accommodate storage of not more than 160 casks, for used nuclear fuel generated at Koeberg up to the end of operational life of the plant.



Conditions of this Environmental Authorisation



1. The preferred site Alternative 1 located on the geographic coordinates above is approved.
2. Authorisation of the activity is subject to the conditions contained in this environmental authorisation, which form part of the environmental authorisation and are binding on the holder of the authorisation.
3. The holder of the authorisation is 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.
4. The activities authorised must only be carried out at the property as described above.
5. Any changes to, or deviations from, the project description set out in this environmental authorisation must be approved, in writing, by the Department before such changes or deviations may be effected.

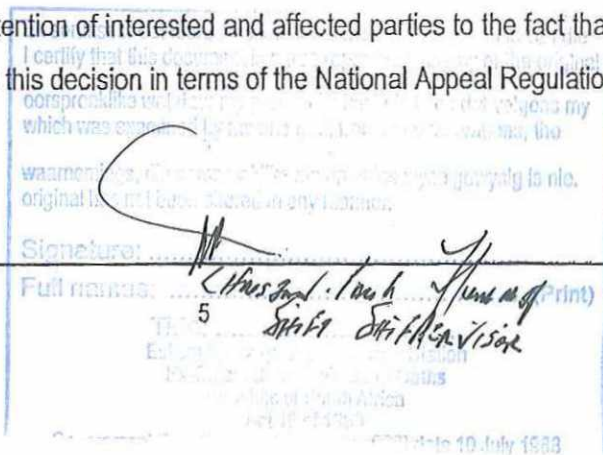
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In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further environmental authorisation in terms of the regulations.

6. The holder of an environmental authorisation must apply for an amendment of the environmental authorisation with the competent authority for any alienation, transfer or change of ownership rights in the property on which the activity is to take place.
7. This activity must commence within a period of five (5) years from the date of issue of this environmental authorisation. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.
8. Commencement with one activity listed in terms of this environmental authorisation constitutes commencement of all authorised activities.

Notification of authorisation and right to appeal

9. 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.
10. The notification referred to must –
 - 10.1. specify the date on which the authorisation was issued;
 - 10.2. inform the interested and affected party of the appeal procedure provided for in the National Appeal Regulations, 2014;
 - 10.3. advise the interested and affected party that a copy of the authorisation will be furnished on request; and
 - 10.4. give the reasons of the competent authority for the decision.
11. The holder of the authorisation must publish a notice –
 - 11.1. informing interested and affected parties of the decision;
 - 11.2. informing interested and affected parties where the decision can be accessed; and
 - 11.3. 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.



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Commencement of the activity

12. The authorised activity must not commence until the period for the submission of appeals has lapsed as per the National Appeal Regulations, 2014 and no appeal has been lodged against the decision. 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.

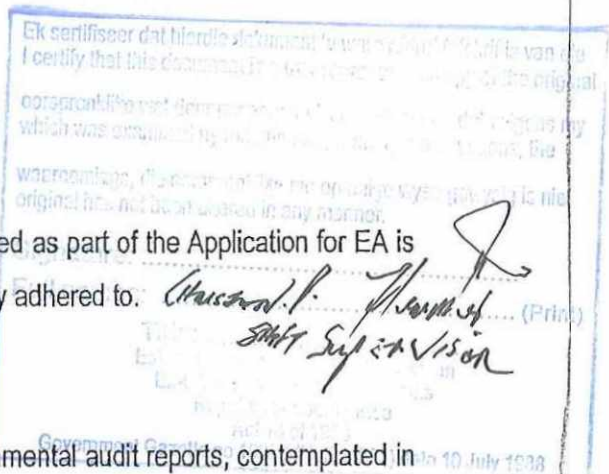
Management of the activity

13. The Environmental Management Programme (EMPr) submitted as part of the Application for EA is hereby approved. This EMPr must be implemented and strictly adhered to.

Frequency and process of updating the EMPr

14. The EMPr must be updated where the findings of the environmental audit reports, contemplated in Condition 23 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.
15. The updated EMPr must contain recommendations to rectify the shortcomings identified in the environmental audit report.
16. The updated EMPr must be submitted to the Department for approval together with the environmental audit report, as per Regulation 34 of GN R. 982. 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.
17. 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 GN R.982. 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.

18. The holder of the authorisation may apply for an amendment of an EMPr, if such amendment is required before an audit is required. The holder must notify the Department of its intention to amend the EMPr at least 60 days prior to submitting such amendments to the EMPr to the Department for



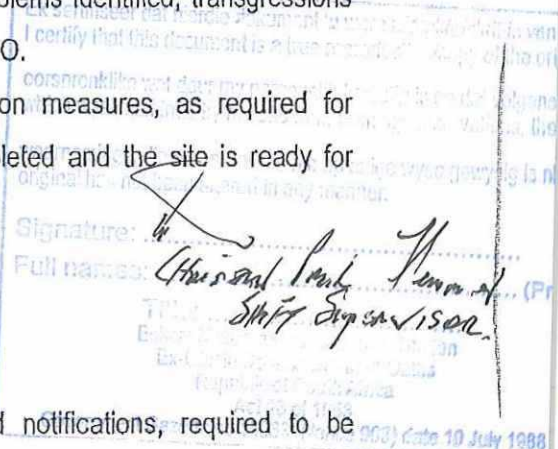
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approval. In assessing whether to grant such approval or not, the Department will consider the processes and requirements prescribed in Regulation 37 of GN R. 982.



Monitoring

19. The holder of the authorisation must appoint an experienced independent Environmental Control Officer (ECO) for the construction phase of the development that will have the responsibility to ensure that the mitigation/rehabilitation measures and recommendations referred to in this environmental authorisation are implemented and to ensure compliance with the provisions of the approved EMPr.
 - 19.1. The ECO must be appointed before commencement of any authorised activities.
 - 19.2. Once appointed, the name and contact details of the ECO must be submitted to the *Director: Compliance Monitoring* of the Department at *Directorcompliance@environment.gov.za*.
 - 19.3. The ECO must keep record of all activities on site, problems identified, transgressions noted and a task schedule of tasks undertaken by the ECO.
 - 19.4. 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.



Recording and reporting to the Department

20. All documentation e.g. audit/monitoring/compliance reports and notifications, required to be submitted to the Department in terms of this environmental authorisation, must be submitted to the *Director: Compliance Monitoring* of the Department at *Directorcompliance@environment.gov.za*.
21. The holder of the environmental authorisation must, for the period during which the environmental authorisation and EMPr remain valid, ensure that project compliance with the conditions of the environmental authorisation and the EMPr are audited, and that the audit reports are submitted to the *Director: Compliance Monitoring* of the Department at *Directorcompliance@environment.gov.za*.
22. The frequency of auditing and of submission of the environmental audit reports must be as per the frequency indicated in the EMPr, taking into account the processes for such auditing as prescribed in Regulation 34 of GN R. 982.
23. The holder of the authorisation must, in addition, submit an environmental audit reports to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site

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handover) and a final environmental audit report within 30 days of completion of rehabilitation activities.

24. The environmental audit reports must be compiled in accordance with appendix 7 of the EIA Regulations, 2014 and must indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the approved EMPr.
25. Records relating to monitoring and auditing must be kept on site and made available for inspection to any relevant and competent authority in respect of this development.

Notification to authorities

26. 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.

Operation of the activity

27. 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.

Site closure and decommissioning

28. Should the activity ever cease or become redundant, the holder of the authorisation must 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.

Specific conditions

29. A botanist must be appointed to confirm the presence of and mark Species of Conservation Concern (SCC) and protected species particularly *Lampranthus cf explanatus* within the area.
30. Rescue and relocation of SCC prior the commencement of construction activities and *Lampranthus cf explanatus* must be relocated into the Koeberg Nature Reserve in consultation with CapeNature.
31. A permit must be obtained from the relevant nature conservation agency for the removal or destruction of SCC, indigenous, protected or endangered plant or animal species.

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- 32. No exotic plants must be used for rehabilitation purposes. Only indigenous plants of the area must be utilised.
- 33. The holder of the authorisation is required to inform the relevant Department should the removal of protected species, medicinal plants and "data deficient" plant species be required.
- 34. In case of the presence of any graves, or human remains, fragments of fossil bone, ostrich egg and stone fragments construction activities must stop and be reported to the Heritage Western Cape or qualified archaeologist.
- 35. An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal.

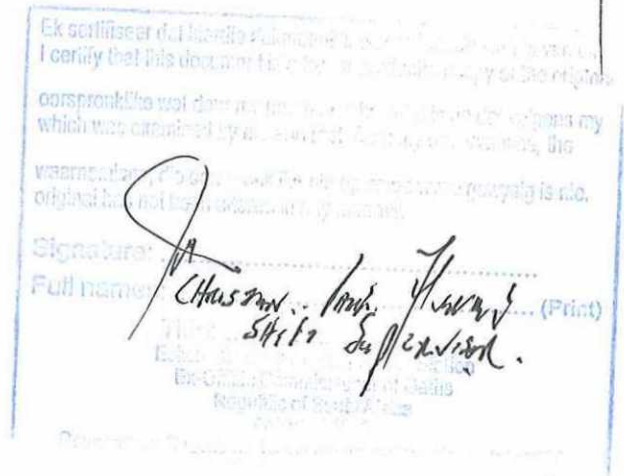
General

- 36. A copy of this environmental authorisation, the audit and compliance monitoring reports, and the approved EMPr, must be made available for inspection and copying-
 - 36.1. at the site of the authorised activity;
 - 36.2. to anyone on request; and
 - 36.3. where the holder of the environmental authorisation has a website, on such publicly accessible website.
- 37. National government, provincial government, local authorities or committees appointed in terms of the conditions of this authorisation or any other public authority shall not be held responsible for any damages or losses suffered by the holder of the authorisation or his/her successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the holder of the authorisation with the conditions of authorisation as set out in this document or any other subsequent document emanating from these conditions of authorisation.

Date of environmental authorisation: 17/05/2017



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



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Annexure 1: Reasons for Decision

1. Information considered in making the decision

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

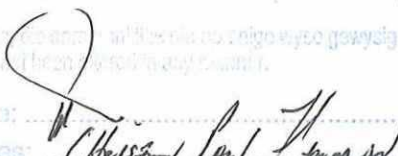
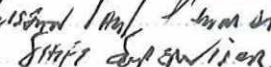

- a) The information contained in the EIAR dated February 2017;
- b) The comments received from interested and affected parties as included in the EIAR dated February 2017;
- c) Mitigation measures as proposed in the EIAR dated February 2017 and the EMPr;
- d) The information contained in the specialist studies contained within Appendix D of the EIAR; 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. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

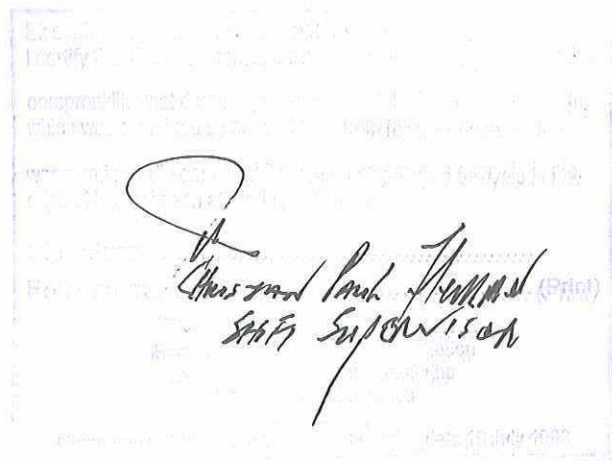
- a) The findings of all the specialist studies conducted and their recommended mitigation measures.
- b) The need for the proposed project stems from the aim of enhancing the medium-to-long term viability of KNPS ensuring continued trade and investment and promoting economic growth.
- c) The EIAR dated February 2017 identified all legislation and guidelines that have been considered in the preparation of the EIAR dated February 2017.
- d) The methodology used in assessing the potential impacts identified in the EIAR dated February 2017 and the specialist studies have been adequately indicated.
- e) A sufficient public participation process was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations, 2014 for public involvement.



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original is. Ek is nie verantwoordelik vir enige
Signature: 
Full names: Christiaan Paul van der Merwe (Print)
Title: 
Ex-Officio: 
Republic of South Africa

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Appendix 3: Technical Detail Information



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TECHNICAL DETAILS

Background information

On 17th May 2017, the Chief Director: Integrated Environmental Authorisations first issued an Environmental Authorisation (EA) register No: **14/12/16/3/3/2/947** to Eskom Holdings SOC Ltd. The authorisation was issued in terms of Regulation 25 of the Environmental Impact Assessment Regulations (R982, R984, and R985 of 2014), for the construction of the used nuclear fuel Transient Interim Storage Facility (TISF) at the Koeberg Nuclear Power Station in Cape Town.

We request your approval for an amendment to this authorisation to change the permitted activities during the operations/usage of the TISF once constructed. The amendment does not affect the clearing of vegetation and the construction and operational footprint as authorised by the EA.

We believe that the amendment requested is in accordance with Part 1: Amendments where no change in scope or changes of ownership occur.

Section 29 of the Environmental Impact Assessment Regulations (2014) states that, an environmental authorisation may be amended by following the process prescribed in this Part if the amendment-

- (a) will not change the scope of a valid environmental authorisation nor increase the level or nature of the impact, which impact was initially assessed and considered when (the) application was made for an environmental authorisation; or*
- (b) relates to the change of ownership or transfer of rights and obligations*

Temporary storage of the original steam generators (OSGs) in the TISF

The issued EA authorised the storage of used nuclear fuel. The amendment we request is to allow the temporary storage of the six original steam generators (OSGs) in the TISF. The OSGs are classified as low and intermediate level radioactive waste.

The characteristics of the OSGs will be enveloped by the storage of the used fuel casks. Please see Attachment 1 for more information.


The OSGs will be temporary stored in the TISF once construction is completed. After temporary storage, the OSGs will be transported to the

Northern Cape for safe disposal at Vaalputs National Radioactive Waste Disposal Facility once all transportation logistics have been finalised. Before transport to Vaalputs is possible, a number of authorisations will be required such as road transport permits, radioactive waste management plan accepted by the National Nuclear Regulator and approved by the minister of energy in terms of the National Radioactive Waste Management Policy and Strategy for the Republic of South Africa, 2005

The construction of the TISF will not be altered nor amended in any way to suit the storage of the OSGs. The approved Environmental Management Plan will not need any amendments and will be implemented as first approved.

We expect storage will only occur for 18 months but a period of 3 years is requested to allow for contingencies.

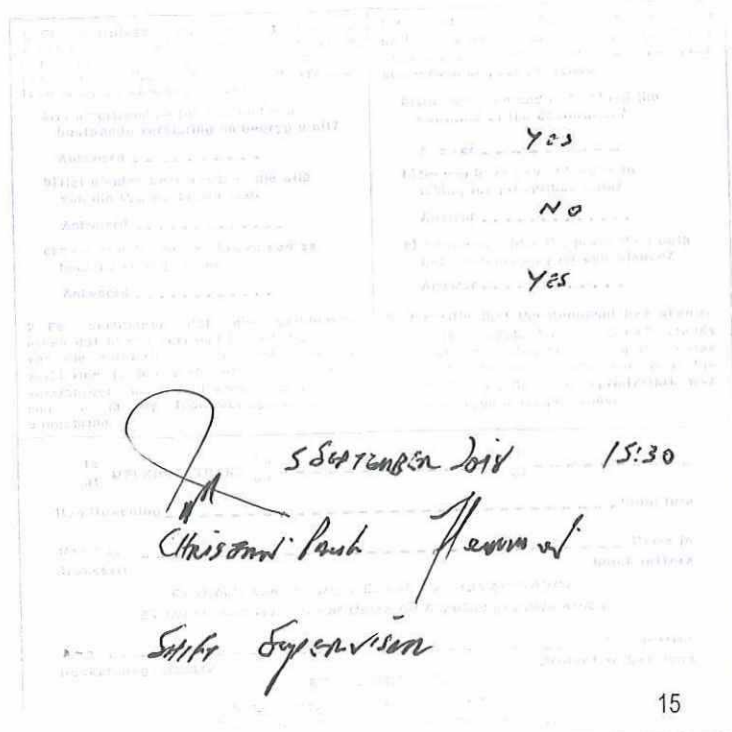
Attachment 1 provides further insight in Original steam generator and the on-site temporary storage thereof.



Velaphi Ntuli

GENERAL MANAGER (KOEBERG NUCLEAR POWER STATION)

Koeberg Operating Unit
R27 Off West Coast Road Melkbosstrand SA
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Tel +27 21 522 1200 Fax +86 566 5824 www.eskom.co.za



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Chrisnaal Paul

Sally Supervisor

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Attachment 1 Original steam generators on site temporary storage briefing note

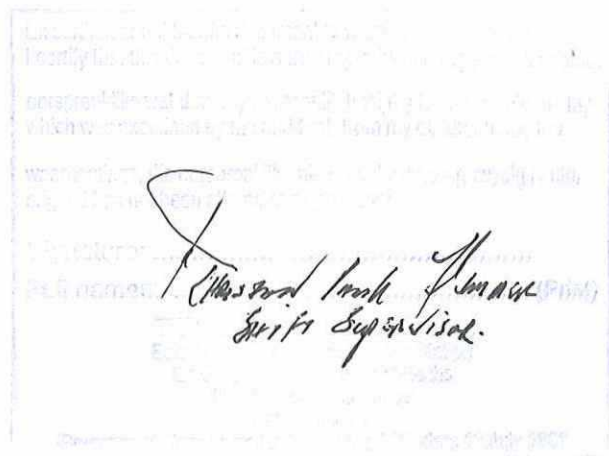
Introduction

Koeberg Nuclear Power Station (KNPS) is planning to replace the steam generators (SGs) in the two reactor units. The reason for the replacement of the SGs is that it has become the norm in the nuclear industry to replace steam generators that have mill-annealed alloy 600 tubing (Koeberg-type), rather than manage the risk associated with tube degradation. The original steam generators (OSGs) are radioactive and must be disposed of as radioactive waste. The preferred option for OSG disposal is immediate disposal at Vaalputs as complete units. Prior to OSG transport to Vaalputs, it is envisaged that temporary storage will be required at Koeberg. The reasons for this are discussed below.

The first installation outage for the replacement of the SGs is planned for January 2021. For planning purposes it is necessary that the OSG on-site storage should be available by December 2020 to allow for contingencies.

Purpose

The purpose of this briefing note is to describe the need for temporary storage for the OSGs, the proposed solution and to provide a description and properties of the OSGs.



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Steam generator description

SGs form part of the primary system in the Pressurised Water Reactor (PWR), (see Figure 1). SGs transfer heat from the primary to the secondary circuits while providing a physical barrier between the primary and the secondary sides.

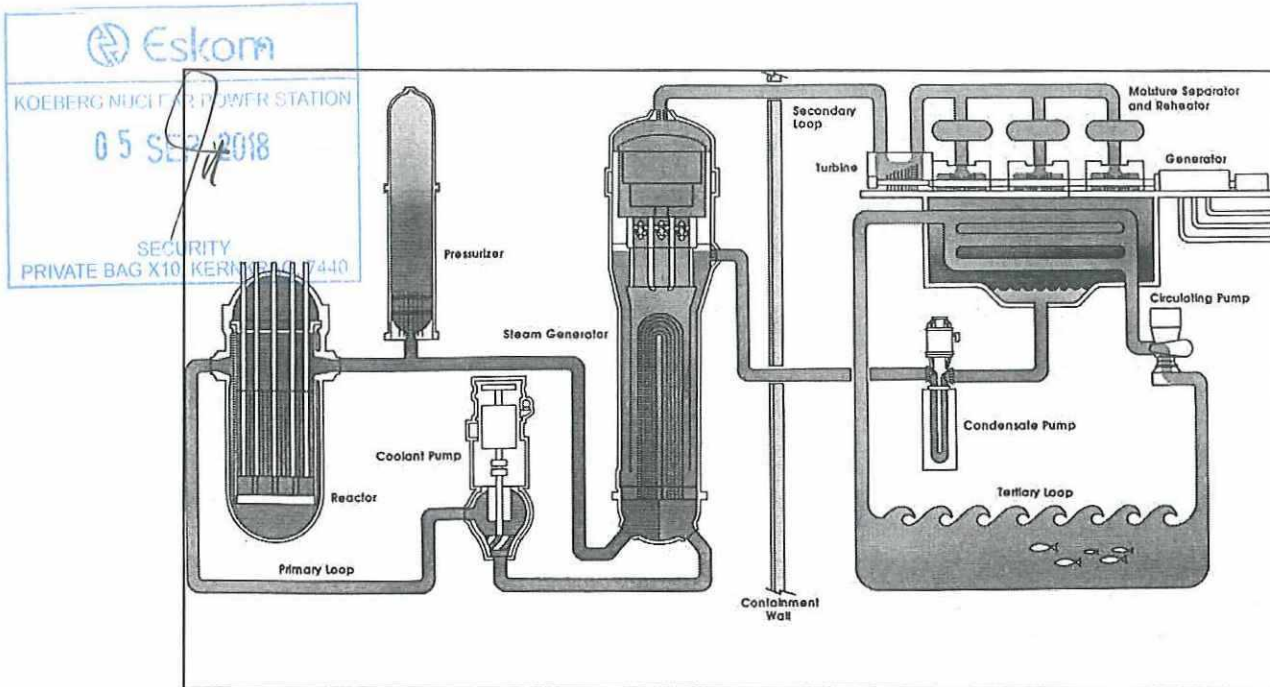


Figure 1: Pressurised Water Reactor Diagram

Water flows from the reactor pressure vessel and enters the SGs through the primary inlet nozzles. The water flows through the SG tubes where the heat transfer takes place with the secondary water on the shell side. The physical properties of the steam generators are:

- Empty Mass: 298.5 t
- Length of the OSG: 20.65 m
- Maximum diameter of the OSG: 4.47 m

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The OSGs will be classified as Low and Intermediate Level Waste – Short Lived in accordance with the Radioactive Waste Management Policy and Strategy for the Republic of South Africa.

The radioactivity is confined to the lower section of the SGs which include the tubes and water boxes. The top section, which includes the steam drum, is not radioactive.

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Direct disposal at Vaalputs

During the SG replacement outage, the OSGs will be removed from the reactor containment buildings before the replacement SGs will be installed. Due to transport logistics, outage duration and availability of the disposal site at that time, it will not be possible to immediately transport the OSGs to Vaalputs for disposal.

Once the OSGs have been processed inside the power station (painting to ensure no loose contamination and all openings closed) they are removed from the containment building. The availability/amount of special abnormal trailers may prevent the OSGs to be immediately transported to Vaalputs at the same time. Also, approval will first need to be obtained in accordance with the National Radioactive Waste Disposal Institute Act, the National Nuclear Regulator and the provincial roads authority. These approvals might not immediately be in place.

These limitations prevents the immediate direct disposal of the OSGs at Vaalputs and therefore an on-site temporary storage location will be required until transport logistics and other supporting activities allow the removal of all OSGs off the KNPS site.

On-site temporary storage

Temporary storage in the planned used fuel Transient Interim Storage Facility (TISF) – Preferred option

KNPS is planning to construct a Transient Interim Storage Facility (TISF) to the north of the Low Level Waste (LLW) Building for the storage of the used nuclear fuel. The DEA has granted the Environmental Authorisation (DEA ref: 14/12/16/3/3/2/947, authorised 17 May 2017) for the construction of the TISF

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space will only be required for the storage of used fuel casks after year 2038, so there will not be any adverse impact on the space for used fuel storage.

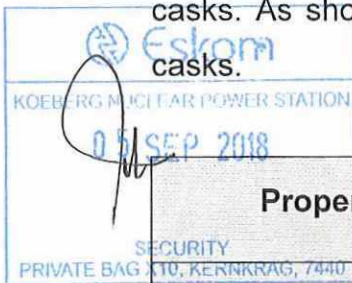
An assessment was performed to determine the dose rates on the Hi-Star 100 used fuel cask (HI-2156880: Estimated on-site collective dose assessment for the Hi-Star 100 system for Eskom). The maximum external contact dose rate on the accessible surface was 1910 $\mu\text{Sv/h}$.

A radiation dose rate survey was performed on the loop 3 OSG during Outage 218. The maximum external contact dose rate on the lagging was 650 $\mu\text{Sv/h}$. The lagging provides minimal shielding.

From the above, the OSG contact dose rate is lower than the used fuel cask contact dose rate. In addition, the radioactive waste classification of the OSG is lower than the used nuclear fuel (high level waste).

Prior to removal from containment, the OSG manways, hand holes and eye holes will be bolted shut. The nozzles will be welded shut. The external surfaces will be painted to fix any external radioactive contamination. Thus the OSGs do not pose any radioactive contamination risk in the TISF facility.

The table below summarises the characteristics of the OSG vs used fuel casks. As shown all of the OSG properties are enveloped by the used fuel



Properties	Used Fuel Cask	OSG
Mass per pad	1263 tonnes (12 casks at 163 tonne)	597 (2 OSGs per pad)
Radiation (contact dose)	1910 $\mu\text{Sv/h}$	630 $\mu\text{Sv/h}$
Height	6m	5.5m (one metre above ground)

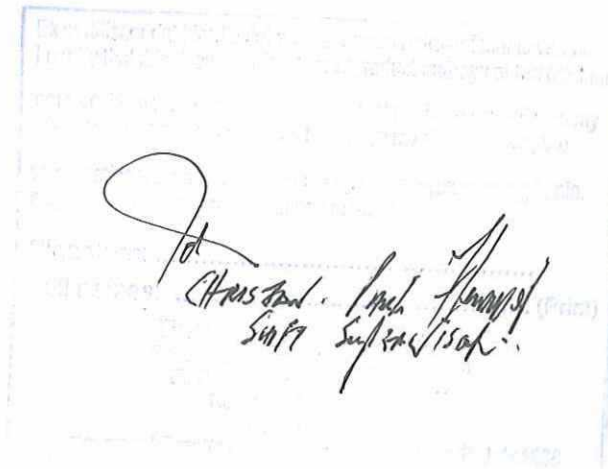
As the Environmental Authorisation has already been granted for the TISF, an application to the DEA for the amendment of the TISF Environmental Authorisation is required to include the temporary storage of the OSGs. The

listed activity relevant the storage of used nuclear fuel is the same as the listed activity for the storage of radioactive waste (list 2, R985, activity 3).

An added benefit would be cost saving as the slab will be utilised for used nuclear fuel storage after the OSGs are transferred to Vaalputs.

Alternative storage options

A number of other alternative storage options were assessed but were not preferred for a number of reasons. The main reasons relate to either increased or unacceptable risk to the project schedule or unnecessary construction (which is not required in the case of the TISF option).



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