



Environmental Impact Assessment for Proposed Transient Interim Storage Facility at Koeberg Power Station

Meeting Notes: Pre-Application Meeting with the DEA and the NNR

Held: Environment House, Pretoria on 20th November 2015, 09:00 – 10:00

| | | |
|------------------------------------|-----|----------------|
| Attendees: Michelle Herbert | MH | Eskom |
| Deon Jeanes | DJ | Eskom |
| Randall Lavelot | RL | Eskom |
| John Geeringh | JG | Eskom |
| Henriette van Graan | HvG | NNR: ERP |
| Peter Mkhabela | PM | NNR |
| Lerato Mokoena | LM | DEA: SID |
| Wayne Hector | WH | DEA: SID |
| Milicent Solomons | MS | DEA: SID |
| Fiona Evans | FE | SRK Consulting |
| Sharon Jones | SJ | SRK Consulting |

1 Welcome and Introductions

- 1.1 Sharon Jones (SJ) welcomed and thanked everybody for making the time to attend the meeting. All attendees briefly introduced themselves.

2 Purpose of the Meeting

- 2.1 SJ stated that the formal Environmental Impact Assessment (EIA) process has not yet commenced and the project is in pre-application phase. The purpose of the meeting is to present the project to the Department of Environmental Affairs (DEA) and the National Nuclear Regulator (NNR) as the two decision-making authorities.
- 2.2 Eskom and SRK would also like to obtain clarity about the interaction required between the two Departments and integration of the EIA process and the NNR application process. This also includes how radiological issues should be dealt with in the two respective processes and who will take decisions regarding these aspects.

3 Project Background and Description

- 3.1 Randall Lavelot (RL) provided a project description and an overview of the motivation for the project i.e. the fact that the spent fuel pools (SFP) at Koeberg are reaching capacity (see attached slides). Currently four dry storage casks (metal) are stored in the cask storage building (CSB). Due to the SFP reaching their capacity, it is proposed to package the used fuel in the dry storage casks and transfer it to the proposed onsite Transient Interim Storage Facility (TISF). It is planned

that the dry storage casks will then be transported to a Centralised Interim Storage Facility (CISF), once this has been established. The CISF has not yet been established although it is anticipated that one may be developed by 2025.

- 3.2 RL stated that there are currently two site alternatives for the TISF; both are on vacant land within the Owner Controlled Area (OCA) of the Koeberg Nuclear Power Station (KNPS). Alternative 1 is the preferred option and it is situated adjacent to the CSB building (and low level waste building). Haul roads will follow existing internal roads on site; however the haul route to Alternative 1 will require lengthening of the existing road by approximately 100m to the site Alternative 1 entrance).
- 3.3 RL stated that the TISF will be a concrete pad of 12 800m² in area and will be able to accommodate up to 160 dry storage casks. The TISF will be filled with casks in a modular manner. Eskom is currently planning to place 40 casks until 2025. The TISF will also have an auxiliary building to house auxiliary equipment within the TISF operational area. Secured perimeter fence, with controlled access, will surround the TISF.
- 3.4 The TISF will meet the requirements of the National Nuclear Regulator (NNR) and it will be built and managed according to International Atomic Energy Agency (IAEA) safety standards. Eskom is considering either metal or concrete casks, although as part of the "localisation" initiative, concrete casks may be preferred as they could be manufactured locally.
- 3.5 RL noted that it is proposed to commence the construction of the TISF in 2018 can take up to 12 months to construct. The construction laydown area will be within the operational footprint of the TISF. Hence there will be no additional disturbance footprint due to construction activities. RL stressed that unless construction of the TISF starts by 2018, there is a possibility of Koeberg shutting operations.
- 3.6 Milicent Solomons (MS) noted that there needs to be a comparative assessment between the two alternatives in the EIA and that the haul road would need to be included in that. SJ confirmed that this will be done.
- 3.7 Michelle Herbert (MH) pointed out that the existing "haul roads" indicated on the slides are existing tarred surfaces and the integrity of the haul routes will be investigated to ensure they are suitable. The haul route to Alternative 1 will require an extension of approximately 100m in length.

4 EIA Process

4.1 Authorisation Requirements

- SJ identified the listed activities requiring Environmental Authorisation in terms of the EIA Regulations, 2014, noting that a Scoping and EIA process would be followed.
- Authorisations may also be required in terms of the National Heritage Resources Act (associated with changing the character of a site exceeding 5 000m³ in size) as well as the National Water Act (if dewatering is required during excavation). No application is required in terms of the National Environmental Management: Waste Act, as radioactive waste is regulated by the National Nuclear Regulatory Act and Nuclear Energy Act.

4.2 Status of EIA Process

- SJ provided an overview of the EIA process, indicating that the project is currently in the Project Initiation (i.e. pre-application) phase. An initial round of public consultation had taken place to make stakeholders aware of the project and identify stakeholder issues and concerns to inform the EIA process.
- It is anticipated that the application will be submitted to DEA in February 2016, and the final EIA around August/September 2016.

4.3 Anticipated Concerns/Potential Impacts

- SJ listed the potential impacts identified by the EIA team as well as initial comments by stakeholders (see attached slides).

4.4 Proposed Specialist Studies

- SJ noted the specialist studies required for the EIA as well as the companies undertaking each of the studies (see attached slides).

4.5 Stakeholder Engagement Process

- SJ provided an overview of the public consultation process undertaken during the Project Initiation Phase, which included the release of a Background Information Document, site notices and advertisements in six different newspapers in three languages. A Public Open Day was also held at the Koeberg Visitors' Centre and a focus group meeting is to be held with the commenting authorities such as the City of Cape Town and the provincial departments in January 2016.
- SJ also provided an overview of the anticipated public consultation during the Scoping and Impact Assessment phases, noting that this would comply with the legislative requirements.

5 NNR Process

- MS noted that it was important to determine how the NNR process fits in with the EIA process, and when input into the EIA process is to be provided by the NNR.
- Deon Jeannes (DJ) provided background on what is already in place in terms of licences from the NNR and stated that Eskom has begun communicating with the NNR regarding the licencing of the TISF. DJ stated that Eskom has previously successfully licenced the four casks in the CSB with the NNR. Licencing with the NNR requires high levels of detail. Studies in this level of detail can only be undertaken after a contract has been placed with a vendor after the project has received environmental authorisation.
- DJ pointed out that Eskom has conducted an internal risk assessment of a generic type of cask and has sent it to SRK for review and inclusion into the EIA in terms of the safety aspects.
- DJ described how the casks work and that they are secure and inherently safe. DJ added that there is no risk of liquid release as the casks are vacuumed and sealed. The biggest challenge is public concern surrounding the storage of nuclear waste. DJ confirmed that the NNR process will follow its own public consultation process as part of the licencing process.

5.2 Process Requirements

- DJ mentioned the radiological aspects of the project and said that it is uncertain whether the DEA will require the NNR as a competent authority to comment on any radiological information that is provided in the EIA document. The EIA will include a description of the NNR licencing process and the assessment of radiological safety will be left to the NNR licencing process.
- MS stated that the DEA has recently engaged with the NNR and a relationship has been established between the two Departments to deal with applications of this nature. MS also mentioned there is an existing task team established for the Nuclear 1 EIA and the same forum will be utilised for this project. It was agreed that comments would need to be obtained from the NNR during the EIA process, specifically with respect to radiological issues. Although these would be authorised separately through the NNR process, they would also need to be taken into account in the EIA process.
- MS noted that if Eskom has addressed stakeholders' or NNR's comments in the EIA process, this does not mean that Eskom has fulfilled the NNR's requirements for their application. Although the EIA process will require less detailed information regarding radiological aspects, the NNR application will need to be more detailed. MS also cautioned the NNR that they should not expect to see the level of detail required for the NNR application in the EIA. It is not possible to address all

of the NNR requirements in the EIA. MH raised the concern that the EIA might be unnecessarily loaded by addressing all technical details required by the EIA process.

- John Geeringh (JG) asked if the EIA is a prerequisite for authorisation from the NNR. It was confirmed that if the Environmental Authorisation is issued it will form part of, or inform, the NNR process. Radiological issues raised during the public consultation process for the EIA will be addressed in the EIA process but the formal NNR licencing process will start later.
- MH asked if the NNR will send their comments directly to DEA and if this will be facilitated by the DEA or if comments would be sent directly to SRK. MS replied that the 2014 EIA Regulations require that the comments from other authorities (organs of state) be facilitated by the Environmental Assessment Practitioner (EAP i.e. SRK). The DEA will however still communicate with the NNR during the process but comments should be submitted directly to SRK as part of the EIA process. DEA will assist if there are delays from other department in terms of the cooperative governance agreement.
- SJ noted that if the NNR is a key commenting authority in the EIA process, as for any other commenting authorities, the EIA Regulations require comments to be submitted within the stipulated 30 day comment period. Peter Mkhabela (PM) understood and agreed with this. It was agreed that where possible the NNR would be notified ahead of time when documents are due to be released for comment. If required, Eskom and SRK would also meet with the NNR to present and discuss the findings of the relevant reports with them to facilitate comments. Allowance has been made for focus group meetings of this nature.
- PM enquired about cumulative impacts and SJ confirmed that, during the Scoping and EIA process, information regarding other projects in the area will be considered and presented. MH confirmed that this would be discussed later on in the meeting.
- DJ pointed out that the NNR has authorised casks in the past and the casks already meet the standards set by the NNR. DJ stated that there are two possible licencing options that could potentially be required by the NNR, either a new licence or an amendment to the existing licence.
- PM requested the reference number (K20249.1N) of the NNR letter referencing Koeberg Spent Fuel Strategy and licensing of the TISF, which was provided (see attached slides).

6 General

6.1 Cumulative Impacts

- MH presented all current and potential projects (i.e. environmental authorisation applications) located at or around KNPS, noting that the potential cumulative impacts might need to be considered in the TISF EIA process. Projects include:
 - Nuclear 1 EIA (in process);
 - Weskusfleur Substation EIA¹ (in process);
 - Basic Assessment (BA) for a new pollution testing station (proposed to start in 2016);
 - BA for a water storage tank and alternative (proposed to start in 2016);
 - Approved Ankerlig 132 kV powerline;
 - BA for the car park (proposed in 2016);
 - BA for diesel storage (proposed in 2016); and
 - Sunbird Energy gas pipeline EIA (in process).
- MH raised the concern that Eskom and SRK do not want the progress of the TISF EIA to be inhibited by the cumulative impacts of all the above-mentioned projects. MH noted further that given the large number of different projects, run by different EAPs and specialist teams, there is a

¹ There was some uncertainty in the meeting regarding the correct name of this project, which has been confirmed by Eskom to be Weskusfleur

potential risk of opposing views/findings between the projects. WH stated that opposing views should not be problematic.

- MS stated that in terms of cumulative impacts: Eskom needs to identify which of these developments will impact on the TISF.
- JG said that in order to accurately determine cumulative impacts, Eskom needs to be certain about impacts of existing projects for which environmental authorisation is being applied e.g. dimensions, vegetation clearance, etc. This information is not yet all available so it will not be possible to include future/proposed impacts. SJ confirmed that the cumulative assessment will at least mention all of these projects and although exact details are not available, would comments on cumulative impacts in a qualitative manner rather than assessing the cumulative impacts in detail.
- PM stated that his concern is about the Sunbird Energy gas pipeline and asked whether Eskom had commented on the Draft Environmental Impact Report (EIR) for this project. DJ confirm that Eskom has commented, noting their objections.
- PM also asked about the legislation relating to temporary storage vs permanent storage of water (with respect to the proposed water storage tanks). DJ discussed regulations regarding temporary storage, explaining that if any facility is built within 100m of the high water mark of the sea, provided that there is no clearance of indigenous vegetation, the facility can be present for up to six weeks without requiring a BA. DJ confirmed that such temporary structures were not included in the list of projects presented.
- MS iterated how useful the image of all relevant projects in the area is. DJ suggested that in the EIA, these projects would be tabulated including details of the relevant status and application numbers of each of the projects. MS confirmed that this would be helpful to the DEA during decision making, to understand the context of each project.

7 Way Forward

- RL once again thank the authorities for taking the time to discuss the project with the team.
- MH asked whether DEA would consider this project to be categorised as a Strategic Infrastructure Project (SIP). MS replied that the Nuclear Energy Program falls under SIP 9 or SIP 10 but not specific projects such as this one. MH confirmed that this confirmation would be in support of prioritising the project, and not necessarily for shortened timeframes given it is a nuclear related project. MS confirmed that she had agreed to attend the meeting to understand the importance thereof, and suggested the EIA team contact the Nuclear SIP Coordinator to confirm whether this project would qualify as a SIP.
- MS iterated how important it is for Eskom to manage the consultants well and to make sure that they review SRK reports thoroughly. MH reassured MS that Eskom has a thorough internal review process. MH further stated that she is an EAP assisting Eskom prepare for the EIA process and with the provision of all the relevant information required by SRK.
- MS raised a concern with respect to the proposed specialist studies, stating that in-house SRK specialists may not be considered independent by the public and that Eskom should consider getting these studies peer reviewed. SJ stated that this was not SRK's interpretation of the definition of independence in terms of the 2014 EIA Regulations. WH advised that SRK and Eskom should consider getting the reports peer reviewed and be cautious with the reviews. MS advised that SRK get a written opinion in this regard from DEA's IQ desk/policy and legislation department.

- DJ mentioned that the proposed CISF is the responsibility of the National Nuclear Radioactive Waste Disposal Institute (NNRWDI). DJ stated that the national policy indicates that Eskom must keep the option of future reprocessing of used fuel open. Therefore Eskom prefers not to use the term “spent” fuel but rather “used” fuel. The fuel in the TISF may be reprocessed and recycled at some stage in the future. As soon as Eskom transfers the fuel over to the NNRWDI it is no longer Eskom’s responsibility. Eskom cannot assume that the CISF will be built in 2025. Therefore, Eskom’s approach is to run the TISF in a modular fashion for the remaining anticipated operational life of KNPS.
- MS confirmed that reports must be submitted to the Chief Director at DEA and that she would provide details of the relevant SIP Coordinator after the meeting.
- It was suggested by WH that SRK and Eskom take note of the stakeholder comments on the Nuclear 1 EIA project to help predict the types of concerns that may be raised through this current project.
- There were no further comments or questions. SJ thanks everyone for a valuable discussion and closed the meeting.

Meeting closed at 10.00 am
Notes taken by: Fiona Evans

SRK Consulting - Certified Electronic Signature

 *Sharon Jones*

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Signed by: _____

Date: 7 December 2015

Sharon Jones

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Koeberg Nuclear Power Station: Transient Interim Storage Facility (TISF) EIA



**Authorities Pre-Application Meeting
20 November 2015**

 **srk** consulting

Agenda

- Welcome and Introductions
- Purpose of the Meeting
- Project Background and Description
- EIA Process
- NNR Process
 - Process Requirements
 - Integration with EIA process
 - Addressing Radiological issues
- General Discussion

Koeberg TISF EIA

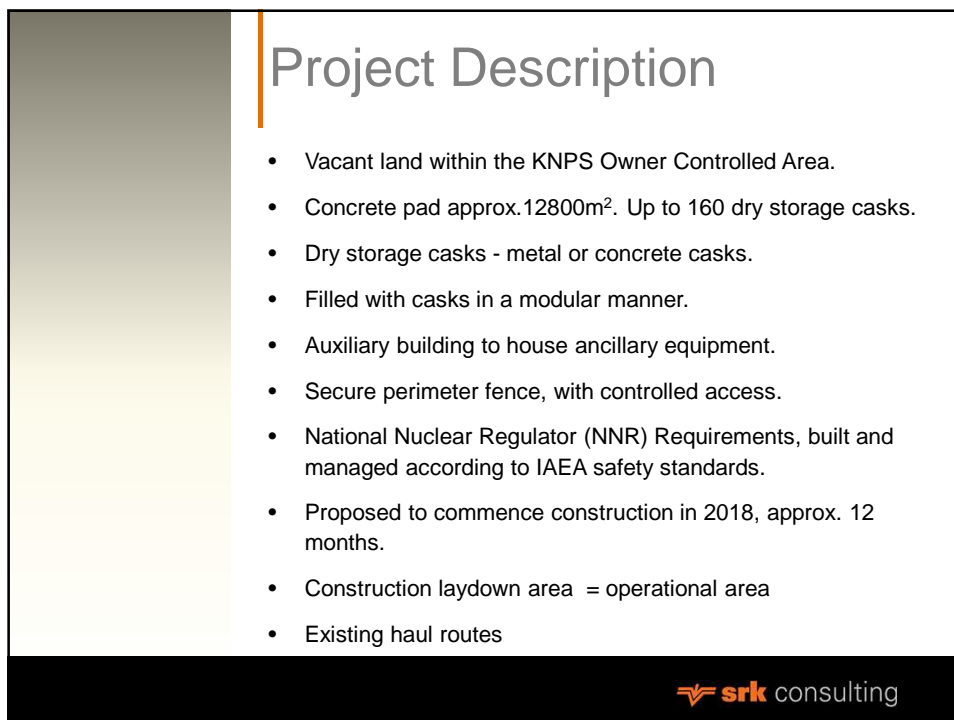
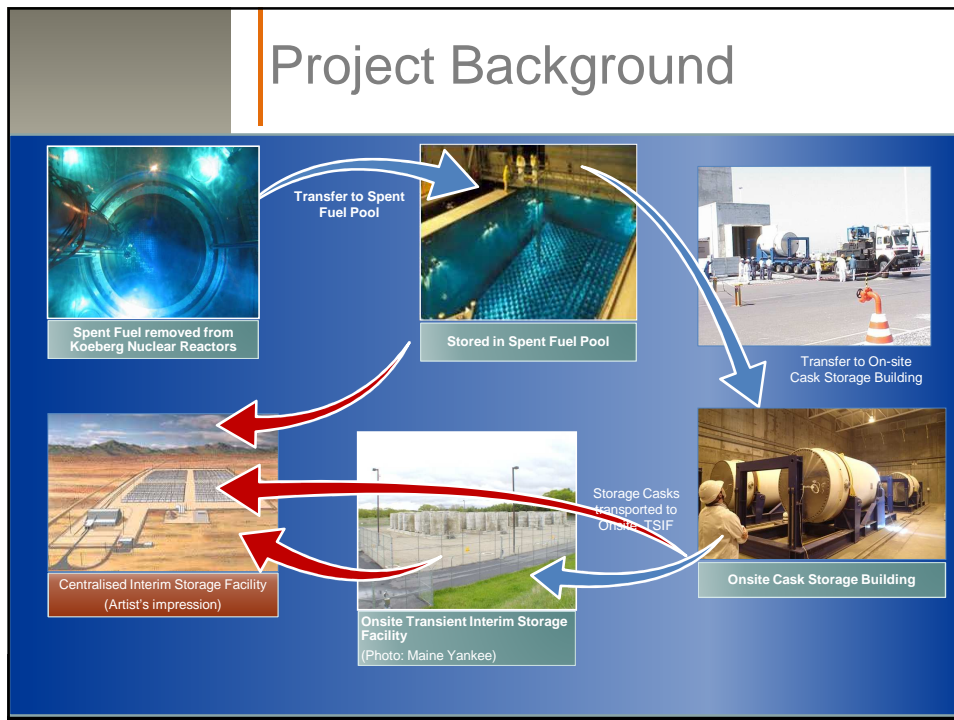
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What would we like to achieve today?

Purpose of the Meeting

- Present the proposed project
- Present the proposed EIA process
- Clarify integration between EIA process and NNR process
- Confirm how radiological issues will be addressed
- Determine additional requirements by decision-making authorities

Project Background and Project Description: Eskom





EIA Process

Koeberg TISF EIA

srk consulting

The slide features a large white area with the text 'EIA Process' in orange. A vertical orange bar is on the left. The bottom of the slide has a black bar with 'Koeberg TISF EIA' on the left and the 'srk consulting' logo on the right.

NEMA EIA Regulations 2014

Listed Activities to NEMA EIA Regulations requiring Environmental Authorisation:

Listing Notice 1:

- 27: Clearance of >1ha indigenous vegetation

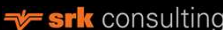
Listing Notice 2:

- 3: The development and related operation of facilities or infrastructure for ...storage or disposal of ...nuclear waste

Listing Notice 3:

- 12: Clearance of >300 m² indigenous vegetation in endangered or critically endangered ecosystem (Cape Flats Dune Strandveld)

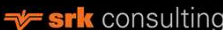
What needs to be authorised?

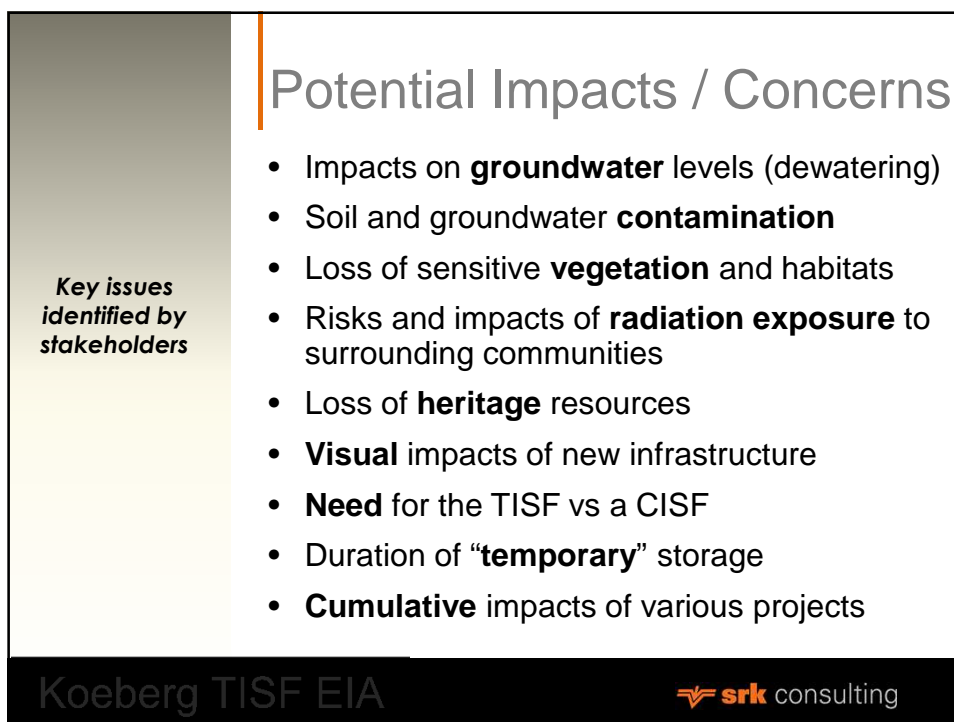
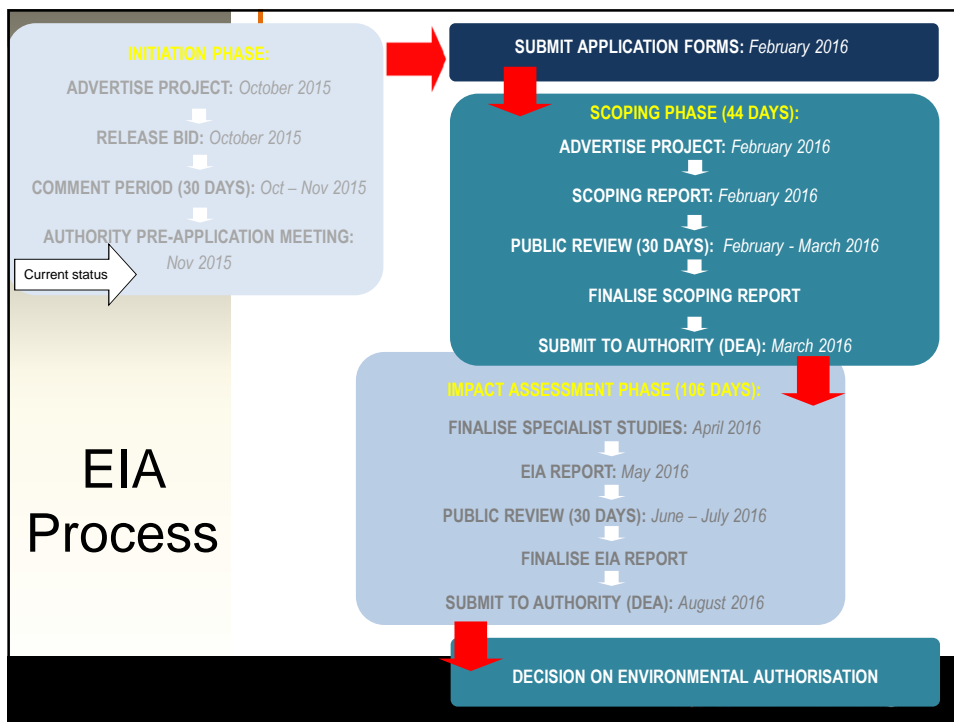
Koeberg TISF EIA 

Other Authorisations

- **National Heritage Resources Act:** authorisation for any activity changing the character of a site exceeding 5 000 m²
- **National Water Act:** Authorisation required if dewatering of excavation during construction (unlikely)
- **National Waste Act:** does not apply to radioactive waste, which is regulated by the National Nuclear Regulator Act and the Nuclear Energy Act

Are any other authorisations required?

Koeberg TISF EIA 



Specialist Studies/Input

| Study | Specialist |
|-----------------------------------|-----------------------------|
| Terrestrial Ecology | Scientific Aquatic Services |
| Heritage | ACO |
| Groundwater | SRK Consulting |
| Visual | SRK Consulting |
| Socio-Economic | SRK Consulting |
| Review of Radiological Assessment | SciRad |
| Health | Infotox |
| Review of Emergency Response Plan | NECSA |

Koeberg TISF EIA

 **srk** consulting

Stakeholder Engagement Process

Pre-Application:

- Advertisements (6 newspapers - 3 languages)
- Background Information Document
- Notification to stakeholders
- Site Notices
- Public Open Day (Koeberg Visitors Centre)
- Stakeholder Registration & Comments
- Pre-Application Meeting with decision making authorities
- Focus Group Meeting with commenting authorities

Koeberg TISF EIA

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Stakeholder Engagement Process

Scoping:

- Advertisements
- Notify registered stakeholders
- Release executive summary
- 30 day comment period
- Public Open Day
- Focus Group Meeting(s)
- Capture comments and responses in report

Impact Assessment:

As for Scoping Phase

Koeberg TISF EIA

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National Nuclear Regulator Process

Koeberg TISF EIA

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Notifications and Approvals

Authorisation received from DoE:

- Onsite storage of spent fuel
- Transfer of spent fuel between SFP and storage facility
- Construction of TISF on the Koeberg site



Koeberg TISF EIA



Notifications and Approvals

Conditional concurrence from the NNR of the Koeberg Spent Fuel Storage Strategy.

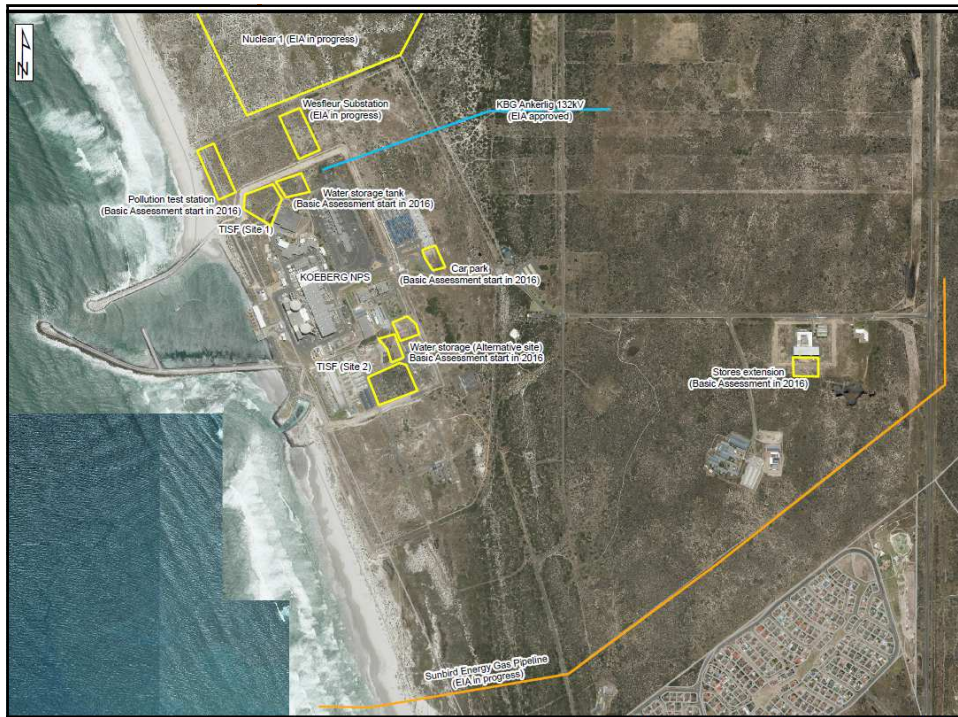


Koeberg TISF EIA



Cumulative Impacts

Koeberg TISF EIA



Questions



Environmental Impact Assessment for proposed Eskom Koeberg Transient Interim Storage Facility (TISF)

Minutes of a Meeting: Authorities Focus Group

**Held: DEA&DP Offices, Utilitas Building, 1 Dorp Street, Cape Town on 26 January
 2016 at 10h00.**

| | | | |
|-------------------|----------------------|----|---|
| Attendees: | Adri la Meyer | AM | Department of Environmental Affairs and Development Planning (DEA&DP) |
| | Melanese Schippers | MS | DEA&DP: Development Management (Region 1) |
| | Peter Harmse | PH | DEA&DP: Air Quality Management |
| | Bhawoodien Parker | BP | DEA&DP: Air Quality Management |
| | Zayed Brown | ZB | DEA&DP: Pollution Management |
| | Eugene Pienaar | EP | DEA&DP: Waste Management |
| | Alvan Gabriel | AG | DEA&DP: Development Management (Region 1) |
| | Lance McBain-Charles | LM | DEA&DP: Waste Management |
| | Russell Mehl | RM | DEA&DP: Pollution Management |
| | Anthony van Wyk | AW | DEA&DP: Environmental Officer |
| | Ian Gildenhuys | IG | City of Cape Town (CoCT): City Health |
| | Morné Theron | MT | CoCT: Environmental Resources Management |
| | Pat Titmuss | PT | CoCT: Environmental Resources Management |
| | Tayeb Jappie | TJ | Eskom |
| | Randall Lavelot | RL | Eskom |
| | Ryan Jonas | RJ | Eskom |
| | Michelle Herbert | MH | Eskom |
| | Deon Jeannes | DJ | Eskom |
| | Bulelwa Ngwenya | BN | Eskom |
| | Chris Dalgliesh | CD | SRK Consulting |
| | Sharon Jones | SJ | SRK Consulting |
| | Jessica du Toit | JD | SRK Consulting |
| Apologies: | P Mkhabela | PM | National Nuclear Regulator (NNR) |
| | Errol Myburg | EM | Heritage Western Cape (HWC) |
| | Derril Daniels | DD | Department of Water and Sanitation (DWS) |
| | Bettie Leedo | BL | CoCT |
| | Eddie Hanekom | EH | DEA&DP: Waste Management |
| | Shaun Arendse | SA | DEA&DP: Waste Management |
| | Bhawoodien Parker | BP | DEA&DP |
| | Gottlieb Arendse | GA | DEA&DP |

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| Wilna Kloppers | WK | DEA&DP |
| Joy Leaner | JL | DEA&DP |
| Hadjira Peck | HP | DEA&DP |

1 Safety Induction

- 1.1 Peter Visser (PV) gave a short safety induction, explaining the evacuation procedure for the Utilitas Building.

2 Welcome and Introductions

- 2.1 Chris Dalglish (CD) welcomed everyone to the Authorities' Focus Group Meeting and thanked them for attending. All meeting attendees introduced themselves.

3 Purpose of the Meeting

- 3.1 CD explained that the purpose of the meeting is to present the proposed Koeberg Transient Interim Storage Facility (TISF) project to the authorities, confirm authorisation requirements, outline the proposed EIA process, identify authority concerns and requirements, and to provide the authorities with an opportunity to raise any questions or concerns.

4 Project Motivation and Background

- 4.1 Tayeb Jappie (TJ) provided background to the project, including a brief motivation for the proposed development of the TISF. TJ explained that storage space for used fuel (in the spent fuel pools [SFPs]) at Koeberg Nuclear Power Station (KNPS) will reach capacity by 2018; therefore the TISF is required for the temporary storage of used fuel on site. TJ also discussed the Centralised Interim Storage Facility (CISF), which is a proposed central storage facility for nuclear used fuel and waste. The establishment of the CISF will be the responsibility of the National Radioactive Waste Disposal Institute, and the CISF is only likely to be in operation after 2025.

5 Project Description

- 5.1 TJ described the components of the TISF, which include a concrete pad(s) within a site footprint area of approximately 12 800m² (able to store up to 160 dry casks), an auxiliary building housing ancillary equipment, and a secure perimeter fence with controlled access. Storage casks will be either constructed from metal or concrete, and existing haul roads will be used to transfer the used fuel from the SFPs to the TISF. TJ explained that the construction of the TISF is proposed to commence in 2018, and will take approximately 12 months. TJ emphasised the robust technology and safety features of the casks, including two lids to prevent leakage, and polymers which absorb radiation.

6 Site Characteristics and Potential Impacts

- 6.1 CD discussed the site characteristics of both alternative sites, explaining that the KNPS is a well-studied site with many EIAs having been undertaken in and around the area. CD noted that the impact on vegetation on site is not seen to be a major concern, as both alternatives are on previously transformed and disturbed sites.
- 6.2 CD discussed the key potential impacts and concerns arising from the pre-application stakeholder engagement. The major concerns expressed by stakeholders thus far include the risk of radiation exposure, the duration of "temporary" storage, and the cumulative impact of various projects occurring in and around the KNPS site.
- 6.3 Morné Theron (MT) agreed that the public's main concerns are likely to be the risk of radiation exposure emanating from the casks and the storage of used fuel at KNPS becoming a permanent practise. These issues must be clearly addressed in public documents.

7 Authorisation Requirements

- 7.1 CD briefly outlined SRK's understanding of the authorisation requirements for the TISF. Authorisations will be required in terms of:
- National Environmental Management Act (NEMA) EIA Regulations, 2014;
 - National Nuclear Regulator Act, 1999; and
 - National Heritage Resources Act, 1999.
- 7.2 CD noted that the TISF project is unlikely to require either a Water Use Licence or a Waste Management Licence.

8 EIA Process

- 8.1 CD briefly explained the EIA process, noting that the project is currently in the initiation (pre-application) phase.
- 8.2 CD discussed the specialist studies which will inform the EIA. Specialist assessments will be undertaken as part of the Impact Assessment Phase of the EIA Process to investigate the key potential environmental issues and impacts identified during the Scoping Phase of the TISF project. The following specialist studies are proposed for the Impact Assessment Phase:
- Terrestrial Ecology Impact Assessment (Scientific Aquatic Services);
 - Heritage Impact Assessment (ACO);
 - Groundwater Impact Assessment (SRK Consulting);
 - Visual Impact Assessment (SRK Consulting);
 - Socio-Economic Assessment (SRK Consulting);
 - Review of the Radiological Assessment (SciRad);
 - Health Impact Assessment (Infotox); and
 - Review of the current Emergency Response Plan (NECSA).
- 8.3 CD explained the stakeholder engagement process undertaken to date. CD noted that advertisements for the project have been placed in six newspapers, but that there has been only limited public interest thus far, and few members of the public attended the pre-application Public Open Day in October 2015. CD then provided detail on the planned stakeholder engagement process for the Scoping and Impact Assessment phases.
- 8.4 Alvan Gabriel (AG) suggested that the Draft Scoping Report be released for comment prior to the Application Form being submitted to DEA, noting that this comment period would not need to be advertised and registered stakeholders could be notified.

9 Cumulative Impacts

- 9.1 Michelle Herbert (MH) discussed the other current and future projects on and near the KNPS site for which EIAs are required. These include:
- Sunbird Energy Gas Pipeline: EIA in progress;
 - Nuclear 1: EIA in progress;
 - Weskusfleur Substation: EIA in progress;
 - Stores extension: Basic Assessment in 2016;
 - Water storage tank: Basic Assessment in 2016;
 - Pollution test station: Basic Assessment in 2016;
 - Car park: Basic Assessment in 2016; and
 - Water storage (alternative site): Basic Assessment in 2016.

- 9.2 MH explained that three EIAs are currently underway and five Basic Assessments (BA) will commence in 2016. Environmental authorisations have been obtained for the KBG Ankerlig 132kV: EIA and the Koeberg Training Centre Complex and Administrative Centre.
- 9.3 Pat Titmuss (PT) and MT noted that they would be concerned about potential cumulative impacts (e.g. loss of indigenous vegetation) of the various projects on the KNPS site, and raised concerns about the difficulty faced by authorities in evaluating such cumulative impacts. MT further indicated that providing a cumulative impacts map of the various projects on the KNPS site would be of great assistance to the CoCT.

10 General

- 10.1 A number of issues and concerns were raised. These issues and concerns were discussed and responded to at the meeting, and are summarised in Table 1 below.

11 Way Forward

- 11.1 CD noted the key dates going forward. The Application Form will be submitted to DEA and the project advertised in July 2016, followed by a 30 day public and authority comment period. The release of the draft Scoping Report for comment prior to submission of the Application Form (as suggested by Elvin) would be discussed with Eskom. [Subsequent to the meeting, the decision was taken to release the Scoping Report for a pre-application public and authority comment period in February/March 2016].

Table 1: Issues and Concerns

| # | Issue / Concern | Authority | Response provided by the Project Applicant / Environmental Assessment Practitioner (EAP) |
|--------------------------------------|--|----------------|---|
| Intended Lifespan of the TISF | | | |
| 1. | Could the TISF potentially become permanent, until the end of Koeberg's operating life? What if the CISF is not built? | Morné Theron | The CISF is a crucial component of the government's nuclear programme, and the government intends to build the CISF by 2025. However, if the construction of the CISF is delayed, the TISF will have the capacity to accommodate used fuel for the duration of the existing Koeberg Nuclear Power Station's (KNPS) –operating life. The current EIA is for approval of the entire TISF facility (should it be required), however it will be developed in a modular fashion, as storage demand dictates. |
| 2. | Are there different design requirements for a temporary storage facility and a permanent facility? | Russell Mehl | A permanent facility (such as a CISF) would require a building with thick walls and a thick concrete slab, while a temporary structure requires only a thick concrete slab. A permanent structure cannot be authorised under KNPS' current licence from the NNR. Therefore a temporary storage facility is proposed at KNPS_ for which the existing licence can be amended. |
| Risk of radiation exposure | | | |
| 3. | Is there any international experience of casks leaking and emitting radiation? | Ian Gildenhuys | The casks are constructed of steel and concrete and contain polymers which absorb radiation. The integrity of casks is stringently tested according to NNR standards. Extremely robust technology is used to prevent radiation exposure, and casks are designed to withstand a 9m drop and temperatures of 800°C. No casks are known to have leaked to date. Casks cost approximately R 40 to 50 million each, and are designed for at least a 50 year lifespan. Monitoring between the two lids of an individual cask takes place, so that any leaks would be detected. |
| 4. | If the casks are damaged, will there be radiation exposure? | Morné Theron | Any maintenance on the casks will be conducted inside the Cask Storage Building (CSB). The lids of the casks will never be lifted, and the fuel assemblies will never be exposed to the atmosphere. |

| | | | |
|----------------------------|---|----------------|---|
| 5. | What is the security risk of used fuel storage in the TISF? | Ian Gildenhuys | Each cask weighs approximately 150 tonnes, so they are not easily moved or stolen In terms of International Atomic Energy Agency (IAEA) requirements, the TISF will need to be monitored and will be linked to cameras at the KNPS. It will also be independently monitored by the IAEA. |
| 6. | Will the TISF remain uncovered (without a roof structure)? | Morné Theron | Yes, the TISF will remain uncovered. An unenclosed concrete slab (on which the casks are positioned) is safer as it allows for effective heat exchange and cooling of the individual casks. In case of an emergency situation (e.g. a tsunami event) a building (with a roof structure) could collapse thus preventing adequate heat exchange of the casks. A building able to withstand a tsunami event would be extremely expensive to construct. Eskom cannot afford such a structure at present, and if constructed it could become a permanent facility. The licence issued by the NNR would be valid for a storage period of 5 years, thereafter Eskom would need to re-apply, at which stage the NNR would re-assess the safety case. |
| 7. | What is the cumulative exposure of radiation from the TISF, the existing nuclear plant, and the proposed new nuclear plant (Nuclear 1)? | Ian Gildenhuys | The cumulative radiation from the KNPS site and the TISF is expected to be almost negligible. |
| Project Description | | | |
| 8. | Why has no contingency plan been put in place to recycle or reprocess used fuel? | Zayed Brown | Used fuel in the SFPs has already been re-cycled three times in the reactor (i.e. used for three cycles), and can't be further re-used at the KNPS. Used fuel cannot be reprocessed, as it is an extremely expensive exercise. If encapsulated, the used fuel would need to be disposed of at an underground facility, typically 400 – 500 m deep. |
| 9. | Will fuel assemblies be encapsulated in metal containers? Why can't they be stored at Vaalputs? | Zayed Brown | Vaalputs is not authorised to receive high level waste. |
| 10. | What is done with contaminated water used for cooling in the SFPs. | Zayed Brown | The SFPs are in a closed system, i.e. the water stays in the pools and is filtered to remove some of the contaminants. This water will never be released into the environment. |
| 11. | How often do (maintenance) outages occur? | Morné Theron | Outages occur every 9 months, alternating between the two reactor units. |
| 12. | How long will it take to construct the concrete slab? | Morné Theron | It is anticipated that construction of the TISF will commence in 2018 and will take approximately 12 months. |
| 13. | There is an ongoing EIA for new reactors (Nuclear 1 project). Will the TISF store used fuel from these new reactors as well? | Zayed Brown | The TISF will only store used fuel generated at the existing KNPS site. Any new facility would need to make allowance for the temporary storage of used fuel produced by the facility until the establishment of the CISF. For new nuclear reactors, the SFPs only have capacity to store used fuel for 10 years. It is however anticipated that the new facility would or may only be established around 2025, approximately the same time that the CISF is due to be established. |
| 14. | Will the new casks be the same as the existing casks? | Morné Theron | The existing casts are metal casks. The nature of the new casks will depend on the tender process, but all casks will comply with the relevant NNR regulations and specifications. |
| 15. | What is the construction lead time? | Morné Theron | The TISF facility would be required in 2019, so construction is scheduled to commence in 2018. This allows sufficient time for the EIA process to be completed. |

| General | | |
|----------------|--|---|
| 16. | Is all used fuel produced on site (to date) stored in the 4 existing dry storage casks in the CSB? | <p>Morné Theron</p> <p>No, the SFPs at the KPNS site are able to store 3 000 used fuel assemblies. In the mid-1990s the spent fuel pools were re-racked (densified) to provide additional storage capacity. During this process some of the used fuel was moved to the dry storage casks.</p> |

Meeting closed at 11.50 am
 Notes taken by: Jessica du Toit

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Signed by:

Sharon Jones

Date:

12 February 2016