

Koeberg Public Safety Information Forum (PSIF)

Minutes of the meeting held on Thursday, 27 June 2019

Venue: Visitors Centre, Koeberg Nuclear Power Station

Chairperson: Mrs Smokie La Grange

Deputy Chairperson: Ms Natasha Leaner

Name and Surname	Organisation	Present
Anderson, Melville	Resident	A
Bennet, George	Resident	A
Beyl ,Trudy	Resident	P
Boulanger, Catherine	Resident	A
Browne, Peter	Resident	P
Bruce, Peter	Resident	A
Coertzen, MPC	Resident	A
Coertzen, PZN	Resident	A
Duval, Monique	Tygerburger	A
Fiet, LK	Resident	P
Fiet, TBH	Resident	P
Graaf, Michael	Resident	A
Isophakis, John	Resident	P
Ketcher, A	Resident	A
Kleynhans, Samie	Chairperson: Melkbosstrand Community Police Forum	A
Kruger, Charmaine	Resident	A
Kruger, Willem	Resident	A
La Grange, Duval	Resident	Apologies
Lingard, David	Resident	A
Mayhew, Robert	Resident	P
Mayhew, Sylvia	Resident	P
Maigrot, Cynthia	Resident	A
Maigrot, Harold	Resident	A
Marote, Michael	Atlantis Business Chambers	A
McKinnell, Jennifer	Resident	A
Moses, Bramwell	Resident	P
Motloane, Ntsoaki Beauty	Resident	P
Mpofu Ntabethemba Wellington	Resident	P
Nagan, Roy	Resident	A
Naylor, Paul Edward	Resident	P
Rodrigues, Neil	Resident	A
Scott, Peter	Resident	P
Slabbert, JA	Resident	A
Smith, Henry	Resident	P
Venter, Ursula	Greater Table View Action Forum	A
Williamson, Cordelia	Resident	A
Williamson, Raymond	Resident	A
Wucherpennig, Lyn	Resident	A
Wucherpennig, Roy	Resident	A

OFFICIALS		
Abrahams, Colin	City of Cape Town	A
Ahrends, Joy	Eskom Koeberg	Apologies
Ata, Laurence	Eskom Koeberg	A
Bakardien, Riedewaan	Chief Nuclear Officer – Eskom	
Bester, Peter	National Nuclear Regulator	Apologies
Bruiners, Roger	National Nuclear Regulator	A
de Bruin, Annelise	City of Cape Town	A
Ditlhake, Kentse	Eskom Koeberg	A
Douglas, Mehl	National Nuclear Regulator	A
Featherstone, Keith	Eskom Koeberg	A
Franco, Johannes	City of Cape Town	P
Grose, Nora	Councillor – Ward 23	A
Hirachund, Antje	National Radiation Waste Disposal Institute	P
Jeannes, Deon	Eskom Koeberg	A
Joshua, Debbie	Eskom Koeberg	P
Krause, Martin	Eskom Koeberg	P
Kunene, Ntaoleng	National Radiation Waste Disposal Institute	A
La Grange Smokie	PSIF Chairperson	Apologies
Lavelot, Randall	Eskom Koeberg	P
Le Roux, Jurina	Eskom Koeberg	P
Leaner, Natasha	PSIF Deputy Chairperson	P
Lenders, Ricky	City of Cape Town – Disaster Risk Management	A
Maphoto, Katse	Department of Mineral Resources and Energy	A
Maree, Marc	Eskom Koeberg	P
Maree, Vanessa	National Nuclear Regulator	P
Matlala, Obakeng	Department of Mineral Resources and Energy	P
Mnyanda Xolisa	Eskom Koeberg	P
Moffat, Robert	Eskom Koeberg	A
Moonsamy, Gino	National Nuclear Regulator	A
Nciya, Phozisa	Eskom Koeberg	P
Ndomondo, Thembi	National Nuclear Regulator	A
Ntuli, Velaphi	Power Station Manager - Eskom Koeberg	Apologies
Osman, Shireen	Eskom Koeberg	A
Phidza, Lewis	Eskom Koeberg	P
Phillips, Orion	National Nuclear Regulator	P
Pillay, Greg	City of Cape Town – Disaster Risk Management	A
Sataar, Haaroen	Eskom Koeberg	P
Silinga, Nangamso	National Nuclear Regulator	A
Stwayi, Mandisi	Eskom Koeberg	P
Thomson, Gary	Eskom Koeberg	P
Tshepe, Tshakane	Department of Mineral Resources and Energy	P
Tyabashe, Loyiso	Eskom	A
Van Schalkwyk, Tobie	Eskom	P
Van Rensburg, Stephen	City of Cape Town	A
Valaitham, Mahesh	Eskom Koeberg	A

Abbreviation/definition list			
Abbreviation	Description	Abbreviation	Description
Accident	An unintended event, including operating errors, equipment failures or other mishaps.	Disaster Management	A continuous and integrated multi-sectorial, multi-disciplinary process of planning and implementation of measures aimed at: <ul style="list-style-type: none"> a) Preventing or reducing the risk of disaster b) Limiting the severity or consequences of disasters c) Emergency preparedness d) Responding rapidly and effectively to disaster; and e) Post-disaster recovery and rehabilitation
AFI	Area for Improvement – usually the outcome of a benchmarking exercise, which enables the identification of successful practices/strategies implemented by other organisations in the same or similar industry,	GCE	Group Chief Executive
Boron	A very hard, almost colourless crystalline metalloid element that in impure form exists as a brown amorphous powder. It occurs principally in borax and is used in hardening steel. The naturally occurring isotope boron-10 is used in nuclear control rods and neutron detection instruments.	ECC	Emergency Control Centre
CIA	Central Intelligence Agency	KNEP	Koeberg Nuclear Emergency Plan
Donax	A genus of small, edible saltwater clams, marine bivalve molluscs. The genus is sometimes known as bean clams or wedge shells or white mussels; Donax species have numerous different common names in different parts of the world.	CISF	Centralised Interim Storage Facility
CISF	Centralised Interim Storage Facility	SPF	Spent Fuel Pool
CSB	Cask Storage Building	TEM	Traffic Evacuation Model
DOC	Disaster Operations Centre	Evacuation	The rapid, temporary removal of people from the area to avoid or reduce short-term radiation exposure in the event of an emergency.
ECC	Emergency Control Centre	UAE	United Arab Emirates
EIA	Environmental Impact Assessment	INPO	Institute of Nuclear Power Operations
Emergency Plan	A document describing the organisational structures, its roles and responsibilities, concept of operation, means and principles for intervention during an emergency at Koeberg.	UPZ	Urgent Protective Action Zone
EPZ	Emergency Planning Zone	EPSOC	Emergency Planning Steering and Oversight Committee
FC	Functional Coordinator	CPA	Consumer Protection Act
IPP	Independent Power Producer	KEP	Koeberg Emergency Procedure

IPP	Independent Power Producer	mSv	The millisievert (mSv) is a measure of the absorption of ionising radiation by the human body.
ISO	International Standards Organisation	CCT	City of Cape Town
KNPS	Koeberg Nuclear Power Station	IAEA	International Atomic Energy Agency
NOU	Nuclear Operating Unit	SABC	South African Broadcasting Corporation
SGR	Steam Generator Replacement	TISF	Transient Interim Storage Facility
KPSIF	Koeberg Public Safety Information Forum	WANO	World Association of Nuclear Operators
LTI	Lost Time Injury	Emergency	An event that requires taking prompt action, or the special regulation of persons or property, to limit the risk to people's health, safety or welfare, or to limit damage to property or the environment.
MW	Megawatts. A unit of measure - one megawatt is equal to one million watts.	CCGT	Closed Cycle Gas Turbines
NECSA	South African Nuclear Energy Corporation SOC Limited	DOC	Disaster Operations Centre
NNR	National Nuclear Regulator	NOSCAR	The grading of NOSA for safety performance.
NOSA	National Occupational Safety Association	Radiation	Energy released in the form of particles or electromagnetic waves during the breakdown of radioactive atoms.
NSRB	Nuclear Safety Review Board	NRWDI	National Radiation Waste Disposal Institute
OCA	Owner Controlled Area	AECC	Alternate Emergency Control Centre
OEM	Original Equipment Manufacturer	FME	Foreign Material Exclusion
Outage	Refers to the maintenance period on a power plant when a number of activities are performed on equipment that keeps the plant running.	National Electricity Grid	The network of high-voltage power lines fed by the various power stations, which supplies electricity to the country.
PAZ	Precautionary Action Zone	EP	Emergency Plan
PSM	Power Station Manager	Sheltering	A protective action whereby members of the public stay indoors with windows and doors closed, to reduce their exposure to radioactive material in an emergency situation.
Public Notification	Notification to the public of an emergency and the appropriate protective actions to be taken by using the installed siren and loudspeaker system, as well as local authorities, local radio and television station.	EMP	Environmental Management Plan
Release	The controlled or accidental discharge of radioactive substances into the environment.	UPZ	Urgent Protective Action Planning Zone
SAPS	South African Police Service	KCWIB	Koeberg Cooling Water Intake Basin
SHEQ	Safety Health Environment and Quality	WAC	Waste Acceptance Criteria
SSA	Sea Shore Act	SAMG	Severe Accident Management Guideline
TEM	Traffic Evacuation Model	NERSA	National Energy Regulator of South Africa
UAG	Unplanned Automatic Grid Separation	Hazmat	Hazardous material

1. Welcome

Mr Phidza, the Koeberg Stakeholder Management Manager, opened the meeting and informed the members that the Chairperson had taken ill and would not be able to attend/chair the meeting.

2. Safety briefing

Mr Phidza did the safety briefing of the venue, highlighting the safety protocols, as well as the emergency alarms and what they mean. He emphasised that everyone in attendance should ensure that they had signed the attendance register which also serves as an accountability register in case of an emergency.

3. Announcement of the Deputy Chairperson – Mr Orion Phillips

Mr Phillips announced that, as per the PSIF regulation, Ms Natasha Leaner had been appointed as the Deputy Chairperson for the Koeberg PSIF. He further explained that she is more than capable to take the place of the Chairperson in her absence.

Ms Leaner took the place of the Chairperson and welcomed everyone to the June PSIF meeting. She asked that everyone in attendance complete the register and also informed the members that a new register has been implemented, and that since Eskom is in the process of updating the existing register, members should update their information.

4. Apologies

The following apologies were tendered

- Ms Smokie La Grange
- Mr Neil Rodrigues
- Mr Velaphi Ntuli
- Mr Peter Bester
- Ms Joy Ahrends

5. Acceptance of the Minutes of the previous meeting

The Minutes of the previous meeting were proposed by Mr Mayhew and seconded by Mr Browne.

6. Matters arising from the previous meeting

Mr Naylor raised two matters; one related to the issue of Erf 1694. Mr Phidza informed him that the issue would be discussed under General. The other issue was about the lack of adequate lighting causing poor visibility on the pathway leading up to the Visitors Centre, which he noted was also mentioned in the Minutes of the previous meeting.

Response by Mr Phidza

Mr Phidza assured the member that attention would be given to the lighting at the Visitors Centre and that it will be repaired before the next PSIF meeting.

Question by Mr Mayhew

Mr Mayhew enquired about his request for the NNR feedback on the Emergency Plan Exercise to be one of the topics on the Agenda for the meeting.

Question by Mr Isophakis

Mr Isophakis queried the correctness of the statement relating to the capacity of Koeberg on page 6 of the Minutes...*Koeberg is a base load station operating and generating 930 megawatts of power 24 hours a day.*

Response by Mr Phidza

Mr Phidza informed him that it should have read 930 megawatts per unit and that it would be corrected on the Minutes.

6.2 Koeberg Nature Reserve Wildlife Management – Ms Jurina Le Roux

Jurina Le Roux, presented on how Koeberg Nature Reserve manages the wildlife in the reserve.

6.3 Koeberg Nuclear Power Station quarterly feedback – Mr Tobie van Schalkwyk: Nuclear Services Manager (standing in for Mr Velaphi Ntuli - Koeberg Power Station General Manager)**Question by Mr Scott**

Mr Scott enquired about the estimated down time for each steam generator.

Response by Mr Featherstone

Mr Featherstone responded that it could be anything between 90 and 120 days due to the huge workscope involved.

Question by Mr Isophakis

The member enquired about the total number of steam generators (SGs) that were mentioned in the presentation.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that there are three SGs per unit, which means there is a total of six steam generators to be replaced at Koeberg Power Station.

Question by Mr Mayhew

Mr Mayhew queried how involved the NNR is in the process.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that the NNR is part of the process, and that they scrutinise everything involved in the process. He further explained that the NNR has permanent inspectors responsible for the complete oversight of the manufacturing and design of the SGs.

Question by Mr Naylor

Mr Naylor queried whether this project forms part of extending the life of Koeberg.

Response by Mr van Schalkwyk

Mr van Schalkwyk confirmed that it forms part of Koeberg's life extension programme.

Question by Mr Mayhew

Mr Mayhew enquired about the progress of shipping Koeberg's waste to another location.

Response by Mr Sataar

Mr Sataar informed the members that the current site earmarked for the High Level Waste/Spent Fuel Repository is Vaalputs. However, the process of identifying an Interim Centralised Storage Facility for high level waste is driven on a national level by the National Radiation Waste Disposal Institute (NRWDI).

Question by Mr Mayhew

Mr Mayhew enquired about storing the casks in an upright position.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that there are different ways of storing the casks. Some casks is stored horizontally, and some vertically.

Question by Mr Mayhew

The member asked about the amount of rods per cask.

Response by Mr Sataar

He responded that there are 32 (spent fuel assemblies) per cask.

Comment by Mr Scott

Mr Scott commented that via the PSIF Forum, the public should be informed about how Koeberg deals with nuclear fuel and nuclear waste as well as the challenges Koeberg faces, and the safeguards and mitigation which are put in place to deal with these challenges.

Response by Mr Phidza

Mr Phidza explained that members of the public were invited to two open days at Koeberg where they were informed about the concept and life cycle of the cask storage project. They were also informed about why Koeberg is embarking on this project. Mr Phidza acknowledged the fact that there is a need for re-education as communication can never be enough.

Question by Mr Mayhew

Mr Mayhew enquired what is stopping Eskom from building another Spent Fuel Pool.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that a safety analysis was conducted and that the best option was fuel casks. He further explained that compared to what the rest of the world is doing, and based on financial viability, Koeberg opted

for dry storage casks. The decision was made to only consider one strategy and not jump between strategies as it would become very expensive.

Question by Mr Mayhew

Mr Mayhew commented that a strategy has been looked at for years, and still there is indecision of where it is going.

Response by Mr Bakardien

Mr Bakardien responded that in the USA, utilities have the same approach of storing their radwaste on site, which is standard practice. He said that casks have been designed to ensure that it is a safe manner of storage and the basis of selecting this method is due to costs and to meet the National Radioactive Waste Disposal Institute (NRWDI) mandate.

Response by Mr Sataar

Mr Sataar suggested that feedback be provided at the next PSIF about the status of the Transient Interim Storage Facility (TISF).

Question by Mr Naylor

Mr Naylor mentioned that he recalled from a previous meeting that the casks were going to be shipped straight to Vaalputs but the delay was due to waiting for certain legislation to be passed.

Response by Mr Bakardien

Mr Bakardien informed the member that he could be confusing it with another project as shipping it to Vaalputs was always planned for 2025.

Question by Mr Mayhew

Mr Mayhew requested that more information about the WANO findings be shared, as well as the progress of the recovery plan in this regard.

Response by Mr van Schalkwyk

Mr van Schalkwyk responded that in the past, Koeberg had 20 Areas for Improvement (AFIs), and currently only 8 AFIs were identified, which shows progress.

Question by Mr Isophakis

Mr Isophakis asked whether the steam generator being removed counts as hazardous waste, and where it would be stored.

Response by Mr van Schalkwyk

Mr van Schalkwyk responded that it would be decontaminated and that provision has been made for appropriate storage.

Question by Mr Naylor

Mr Naylor queried whether it would be stored at Vaalputs since it is nuclear waste.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that all waste is first stored on site for a period of time, before being moved to Vaalputs.

Comment by Mr Bakardien

The discussion between the NNR, Eskom, and the Waste Institute involves finding the optimal means of storage taking into account all the viable options considered.

Question by Mr Isophakis

Mr Isophakis enquired about the time it will take to fill the storage casks before more casks will be needed.

Response by Mr Sataar

Mr Sataar responded that the 14 casks currently at Koeberg will allow for the station to create space in the spent fuel pools of Unit 1 and Unit 2 to safely store spent fuel until 2025. He further said that it takes one week to fill a cask.

Response by Mr van Schalkwyk

Mr van Schalkwyk explained that every outage one third of the reactor core, which houses the fuel, is replaced. This then goes into the spent fuel pool and remains there for a minimum of 10 years before it is loaded into the casks.

Response by Mr Featherstone

Mr Featherstone explained that Environmental Impact Assessment (EIA) for the TISF was for a modular basis/design. The TISF was designed to cater for waste until the end of the life of the station. The station generates approximately two casks every 18 months. Since casks are an asset, are reusable, and can be re-processed, it is not a loss for the country.

Comment by Mr Scott

Mr Scott wanted to know how much radwaste is Koeberg licensed to store as according to him we need approval from the NNR to store the fuel in casks.

Response by Mr Phillips (NNR)

Mr Phillips explained that according to regulatory requirements, the waste generator must pay for the treatment and management of nuclear waste, in this case Eskom has been providing the funding. He further explained that NRWDI is also a very important player in finding a solution for radwaste, as this cannot be done by the NNR alone. He continued to say that proper controls should be in place so as to safeguard the public. He explained that NRWDI is not fully functional at present and that solutions will need to be properly researched and benchmarked, and safety cases developed by Eskom, which takes time as the long-term storage of radwaste is not a quick fix. A long-term solution requires various organisations to work together, e.g. the Department of Mineral Resources and Energy, Eskom, NNR, NRWDI.

Comment by Mr Mayhew

Mr Mayhew commented that it is important to educate the public about the process and the progress of the waste storage plan.

Response by Mr Phillips

Mr Phillips commented that reprocessing must be proven to be viable, and that numerous studies need to be done to ensure the viability of long-term storage. He mentioned that one of the options considered is deep geological storage but involves many studies, which could take up to 20 years.

Question by Mrs Mayhew

Mrs Mayhew asked whether funding will be provided by the government.

Response by Mr Phillips

Mr Phillips explained that according to the regulatory requirements, the waste generator must pay for the treatment and management of nuclear waste.

Comment by Mrs Mayhew

Mrs Mayhew queried where the funding will come from, considering Eskom's financial situation.

Response by Mr Phidza

Mr Phidza responded that Eskom contributes towards waste management. He suggested that a presentation about the back-end and Waste Management Strategy be presented at a future PSIF meeting.

6.4 Radiation incidents in the media – Mr Marc Maree, Corporate Specialist Radiation Protection

Mr Maree presented on the parliamentary question that was raised in parliament and which ended up in the national media about the 'alleged' Koeberg radiation leaks.

Question by Mr Mayhew

Mr Mayhew asked what Tritium is.

Response by Mr Maree

Mr Maree responded that it is a rare and radioactive isotope of hydrogen. The nucleus of tritium contains one proton and two neutrons.

Question by Mr Mayhew

Mr Mayhew queried whether these incidents all happened during one outage and why the public were not informed.

Response by Mr Maree

Mr Maree explained that three different events took place at different times between 2014 and 2015. He further explained that it was a lesson learnt because, as scientists, the focus was more on the number than the perception that was created.

Question by Mr Scott

Mr Scott asked why it was not reported at the PSIF and how it would be corrected in future.

Response by Mr Phidza

Mr Phidza added that due to the absence of clear guidelines and that all the incidents happened before the PSIF Constitution was finalised and approved, and the fact that the levels of radiation released were low, Eskom decided to communicate and reported the incident only to the NNR. He confirmed that since then Eskom changed its policy and now shares with PSIF members everything whether significant or small.

7. General

Mr Mayhew requested feedback about the NNR Emergency Exercise of 29 August 2018, which he has requested as a topic for this PSIF meeting, during the previous PSIF meeting. Mr Phillips indicated that they (NNR) are prepared and ready to present.

Due to time constraints, the members requested that the findings be presented at the next PSIF meeting.

Question by Mr Naylor

Mr Naylor indicated that his issue relates to how concerns raised by the public are handled by Eskom. He said that there are wooden poles with steel bands around them, along the barrier fence at the beach boundary of the power station. He pointed out that with the spring tide, nine poles washed up; his concern was that with the storm expected in the following days after the meeting, they would be washed into the sea, which would pose a serious safety hazard. He said that he had raised the concern with Eskom, and that he had received no response, despite several emails. He expressed that this should have received urgent attention from Eskom due to it being a safety concern, and asked whether this is the way Eskom deals with issues or concerns.

Response by Mr Phidza

Mr Phidza responded that he had been on leave but that he did respond to Mr Naylor. He also mentioned that there is no threat of a security risk as it is not close to the plant area. However, he confirmed that the initial clearance of taller trees as a result of the storm has been done.

Response by Mr van Schalkwyk

Mr van Schalkwyk, Koeberg Nuclear Services Manager, confirmed that the issue would be resolved and that he would go out to inspect the area, assess it, and provide feedback. He also confirmed that he would personally contact Mr Naylor after he had assessed the area.

Question by Mr Naylor

Mr Naylor raised a concern about the Melkbosstrand development. He explained that he had written to the NNR and Koeberg about his issue pertaining to the rules around development within the 5km zone and the reason why the Melkbosstrand development, earmarked for the 5km zone was allowed.

Response by Mr Phillips

Mr Phillips explained that when the City of Cape Town was asked to comment on the EIA on Erf 1964, the NNR responded and objected on the basis that it would increase the population of the area, as well as the transient population. He explained that only a draft regulation is currently in place, and that there is a need for a task team to be established to determine the proper wording and definitions, in order to ensure that a regulation is put in place that protects members of the public.

Response by Mr Naylor

Mr Naylor questioned why this is only being done now, and why it wasn't in place at the time that Koeberg was established.

Response by Mr Phillips

Mr Phillips explained that the Operator has to comply with the requirements document (RD).

8. Date of the next meeting

Thursday, 26 September 2019 at 19:00, at the Koeberg Visitors Centre.

9. Proposed Agenda items for the next meeting:

- NNR feedback on the NNR Regulatory Exercise of 29 August 2018
- Fuel Cask Project update

10. Closing

The Deputy Chairperson thanked everyone for their attendance at the PSIF meeting. The meeting was adjourned at 22:00.