

Koeberg Public Safety Information Forum (PSIF)

Minutes of the meeting held on Thursday, 30 March 2017

Venue: Visitors Centre, Koeberg Nuclear Power Station

Chairperson: Mr Sydney Stuurman

Deputy Chairperson: Natasha Leaner

Name and Surname	Organisation	Present
Alhadeff, Leon	Resident	A
Arbuckle, Graham	Resident	A
Anderson, Melville	Resident	A
Andrews, Melanie	Resident	P
Beyl, Trudy	Resident	A
Boulanger, Catherine	Resident	A
Briesies, Douglas	Resident	P
Bruce, Peter	Resident	A
Browne, Peter	Resident	A
Booyens, Emmarenthia	Resident	P
Clark, John	Resident	P
Cupido, Dimitri	Resident	P
Desjardins, Peter	Resident	A
Duval, Monique	Tygerburger	P
Esau, Phillip	Resident	A
Fiet, Jonnie	Resident	P
Gordon, Stuart Maurice	Resident	P
Graaf, Michael	Resident	A
Grose, Nora	Councillor – Ward 23	P
Isophakis, John	Resident	P
Ketcher, A	Resident	P
Kleynhans, Samie	Chairperson: Melkbosstrand Community Police Forum	A
La Grange, Smokie	Melkbosstrand Ratepayers Association	P
La Grange, Duval	Resident	A
Leaner, Natasha	PSIF Deputy Chairperson	A
Lingard, David	Resident	P
Madima, Tenda	Resident	P
Majjet, Nico	Resident	P
Mayhew, Robert	Resident	A
Mayhew, Sylvia	Resident	A
Maigrot, Harold	Resident	P
Maigrot, Cynthia	Resident	A
Marote, Michael	Atlantis Business Chambers	P
McKinnell, Jennifer	Resident	P
Nagan, Roy	Resident	P
Ntuli, Tiisetso	Resident	P
Nxumalo, Silondiwe	Resident	P
Pienaar-Bouwer, Audrey	Resident	P
Pieters, Nico	Resident	P
Rodrigues, Neil	Resident	A
Saal, James	Resident	P
Saayman, Desmond	Resident	P
Scheepers, C	SMTDC	P
Scott, Neade	Resident	P
Scott, Peter	Resident	A
Shange, Sbu	Resident	P
Shange, Mandisa	Resident	P

Shange, Wandile	Resident	P
Slabbert, J	Resident	P
Stuurman, Sydney	KPSIF Chairperson	P
Van Diemen, Amanda	Resident	P
Van Eeden, John	Resident	P
Van Niekerk, Romerio	Resident	P
Venter, Ursula	Greater Table View Action Forum	P
Wilson, Tug	Resident	A
Williamson, Cordelia	Resident	A
Williamson, Raymond	Resident	A
OFFICIALS		
Abrahams, Colin	City of Cape Town	A
Bakardien, Riedewaan	General Manager Nuclear Engineering – Eskom Koeberg Operating Unit	A
Bruiners, Roger	National Nuclear Regulator	A
De Wet, Joy	Assistant Communications Officer - Eskom Koeberg Operating Unit	P
Engel, Kevin	Plant Manager - Eskom Koeberg Operating Unit	A
Franco, Johannes	Disaster Risk Management Centre	P
Jeannes, Deon	Environmental Manager – Eskom Koeberg Operating Unit	A
Joshua, Debbie	Senior Advisor Stakeholder Management -: Eskom Koeberg Operating Unit	P
Kline, Kim	Emergency Management Liaison Officer – Eskom Koeberg Operating Unit	P
Krause, Martin	Security Management - Eskom Koeberg Operating Unit	P
Makgai, Reuben	National Nuclear Regulator	P
Maree, Marc	Corporate Specialist: Radiation Protection – Eskom Koeberg Operating Unit	P
Maree, Vanessa	National Nuclear Regulator	P
Matlala, Obakeng	Department of Energy	P
Mehl, Douglas	National Nuclear Regulator	P
Nicholls, Dave	Chief Nuclear Officer - Eskom Koeberg Operating Unit	A
Ntuli, Velaphi	Power Station Manager - Eskom Koeberg Operating Unit	P
Osman, Shireen	Business Support Manager – Eskom Koeberg Operating Unit	P
Pete, Ashy	Department of Energy	P
Phidza, Lewis	Manager: Stakeholder Management - Eskom Koeberg Operating Unit	P
Pienaar, Shaun	Communication Officer: Stakeholder Management - Eskom Koeberg Operating Unit	A
Pillay, Greg	City of Cape Town	A
Radebe, Phindile	Assistant Communications Officer – Eskom Koeberg Operating Unit	A
Powell, Charlotte	City of Cape Town	A
Sataar, Haaroen	Manager: Nuclear Project Management - Eskom Koeberg Operating Unit	A
Silinga, Nangamso	National Nuclear Regulator	A
Thauge, Phina	National Radiological Waste Disposal Institute	A
Thompson, Gary	Manager: Emergency Management (Acting) – Eskom Koeberg Operating Unit	P
Van Rensburg, Stephen	City of Cape Town	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
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
CISF	Centralised Interim Storage Facility	SPF	Spent Fuel Pool
DOC	Disaster Operations Centre	TEM	Traffic Evacuation Model
ECC	Emergency Control 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.
EIA	Environmental Impact Assessment	UAE	United Arab Emirates
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.	Plant	Nuclear power station with associated components, machinery, equipment or devices
EPZ	Emergency Planning Zone	UPZ	Urgent Protective Action Zone
FCs	Functional Coordinators	EPSOC	Emergency Planning Steering and Oversight Committee
IPP	Independent Power Producer	CPA	Consumer Protection Act
IPP	Independent Power Producer	KEP	Koeberg Emergency Procedure
ISO	International Standards Organisation	mSv (millisievert)	The millisievert (mSv) is a measure of the absorption of ionising radiation by the human body.
KNPS	Koeberg Nuclear Power Station	CoCT	City of Cape Town
KOU	Koeberg Operating Unit	IAEA	International Atomic Energy Agency

KPSIF	Koeberg Public Safety Information Forum	SABC	South African Broadcasting Corporation
LTI	Lost Time Injury	WANO	World Association of Nuclear Operators
MW	Megawatts. A unit of measure - one megawatt is equal to one million watts.	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.
NECSA	South African Nuclear Energy Corporation SOC Limited	CCGT	Closed Cycle Gas Turbines
NNR	National Nuclear Regulator	DOC	Disaster Operations Centre
NOSA	National Occupational Safety Association	NOSCAR	The grading of NOSA for safety performance.
NSRB	Nuclear Safety Review Board	Radiation	Energy released in the form of particles or electromagnetic waves during the breakdown of radioactive atoms.
OCA	Owner Controlled Area	NRWDI	National Radiation Waste Disposal Institute
OEM	Original Equipment Manufacturer	AECC	Alternate Emergency Control Centre
Outage	Refers to the maintenance period on a power plant when a number of activities are performed on equipment that keeps the plant running.	FME	Foreign Material Exclusion
PAZ	Precautionary Action Zone	National Electricity Grid	The network of high-voltage power lines fed by the various power stations, which supplies electricity to the country.
PSM	Power Station Manager	EP	Emergency Plan
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.	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.
Release	The controlled or accidental discharge of radioactive substances into the environment.	EMP	Environmental Management Plan
SAPS	South African Police Service	UPZ	Urgent Protective Action Planning Zone
SHEQ	Safety Health Environment and Quality	KCWIB	Koeberg Cooling Water Intake Basin
SSA	Sea Shore Act	NSRB	Nuclear Safety Review Board
TEM	Traffic Evacuation Model	SAMGs	Severe Accident Management Guidelines
UAG	Unplanned Automatic Grid Separation	NERSA	National Energy Regulator of South Africa
		Hazmat	Hazardous material
WAC	Waste Acceptance Criteria	FA	Fuel Assembly

1. Opening and welcome

The PSIF Chairperson, Mr Sydney Stuurman, welcomed everyone to the first PSIF Meeting for 2017.

2. Safety briefing

Mr Lewis Phidza conducted the safety evacuation briefing, informing members about the safety protocol of the venue. He informed members that Mr Deon Bing was present and would be recording the PSIF to obtain potential footage for the new Koeberg promotional DVD. . He asked members for their consent. He clarified that it will only be a visual recording and that no audio would be included, with which everyone consented to. Mr John van Eeden gave his conditional consent on the basis that it would be only a visual recording. Deon Bing confirmed that it will only be visual and not audio.

3. Apologies

The following apologies were tendered:

- Ms Natasha Leaner
- Mr Riedewaan Bakardien
- Mr Peter Scott
- Mr Peter Browne
- Mr Neil Rodrigues
- Ms Karen Davis
- Ms Edna Ruth Outen (Pip)
- Mr Graham Arbuckle
- Mr Kevin Engel
- Mr Keith Featherstone
- Mr Gino Moonsamy
- Mr Greg Pillay
- Mr Stephen Van Rensburg
- Mr and Mrs Mayhew
- Mr Dave Nicholls
- Mr Steward Gordon

4. Matters arising from the previous meeting minutes

There were no matters arising from the previous minutes.

5. Acceptance of the Minutes of the previous meeting (1 December 2016)

The Minutes were accepted by Ms La Grange, and seconded by Mr Nagan.

The chairperson informed members that there was only one agenda point for the meeting, namely the Koeberg Quarterly Feedback, which would also address the second proposed agenda point, Update on The Senior Reactor Operators Stability. The first proposed agenda point, The Impact of the Steam Generator Replacement Project, would be carried over to the next PSIF meeting due to unavailability of the presenter. The Update on the Drone Investigation, the third proposed agenda point, would not be covered in the meeting as the investigation is now being conducted by the Hawks, and the Aviation Authority, and is still in progress. Until such time that the investigation has been concluded no further information can be provided.

6. Koeberg Quarterly Feedback - Mr Velaphi Ntuli (Power Station Manager)

Plant status

- There were no nuclear safety concerns
- No significant events have been raised
- No Lost Time Injuries (LTIs) have occurred since December 2016
- Unit 1 has been online for 148 days since Outage 122
- Unit 2 has been online for 474 days since Outage 221 – the Unit 2 record is 484, so there are only 11 days to win the previous record
- Excellent performance – there is a drive that nuclear safety should not be compromised

Koeberg Performance 2016-2017

Eskom Chairman's Awards

*Koeberg received the following awards at the **Eskom Chairman's Awards** ceremony:*

- Power Station of the Year
- Supervisor of the Year
- Chairman's Award for Excellent Service to Nuclear

These awards reflected Koeberg's excellent performance.

Note: *the Chairman's Award is one of the most prestigious awards in Eskom.*

NOSA Audit results

- The NOSA Audit took place from 13 to 17 March 2017
- Koeberg achieved its 18th NOSCART

World Association of Nuclear Operators (WANO) Peer Review

The most recent WANO Peer Review of Koeberg was concluded in February 2017, and Koeberg achieved its best ever rating.

Koeberg Emergency Response

"The Integrated Koeberg Emergency Plan and Radiological Release Hazard Disaster Risk Management Plan (RRR) together with the on-site and off-site procedures are adequate for the protection of people, property, and the environment."

Koeberg Full Volume Siren Test

The Koeberg Full Volume Siren Test was successfully conducted on 1 March 2017, with follow-up testing conducted on 2 and 3 March 2017.

Status of Licensed Operators

Koeberg has a sufficient number of operators, which meets the NNR requirements.

Training of Operators

- The following training courses are currently in progress to ensure that adequate staffing of Senior Reactor Operators (SROs) and Reactor Operators (ROs) is addressed in a sustainable manner:
 - Senior Reactor Operator Course
 - Initial Licence Training (Reactor Operators)
 - New Nuclear Plant Operator (NPO) Training

Economic Impact Assessment of Koeberg

- The 2017 KPMG Economic Impact Assessment (EIA) was presented to the Minister of Public Enterprises, Ms Lynne Brown today, 30 March 2017.
- The event was attended by local and national media, and the Eskom Executive Management team.
- Feedback received from the Minister is that the Koeberg Environmental Impact Assessment (EIA) provides credibility of its contribution to the economy of the Western Cape.
- Koeberg was commended for its positive contribution to the economic growth of the region in that they are attracting individuals from the surrounding areas and for providing quality and sustainable jobs.

Water crisis

- Insufficient water reserves could lead to an emergency situation at Koeberg.
- Koeberg needs approximately 1 200m³ potable water per day for production activities.
- Steps are being taken to research a system that can convert the ground water from the aquifer to water suitable for use in the plant. This consists of two phases:
Phase I: to make water available for supporting the process plant; and
Phase II: to enable Koeberg to become self-sufficient with regard to potable water.
- Additional funding needs to be secured (requested request has been submitted) for the installation of a process plant.
- **2017: looking ahead** - The outage on Koeberg Unit 2 (Outage 222) is scheduled to start on Tuesday, 18 April 2017.
- The outage duration is planned for less than 32 days.
- Improvements in outage duration is to be achieved, by optimising on the scope and in working in an innovative manner.

Question by Mr Isophakis

Mr Isophakis enquired about the notification times of the sirens, which was advertised as taking place between 10:00 and 12:00. He had an issue with the fact

that the sirens in Sunningdale, where he stays, did not sound during the time specified, but only did so 10 or 15 minutes afterwards.

Response by Mr Ntuli

Mr Ntuli acknowledged Mr Isophakis' concern and confirmed that Koeberg will focus on ensuring that the advertised siren times are adhered to in future.

Response by Mr Phidza

Mr Phidza confirmed that six concerns of that nature were received from residents. It was advertised in the local newspapers that the sirens will be tested between 10:00 and 12:00 on 1 March 2017. On 2 and 3 March 2017 the faulty sirens identified on 1 March 2017 were re-tested. Koeberg will attempt to test the sirens taking weather into consideration so as not to affect neighbours.. However, testing was performed at different times on 2 and 3 March for that reason. The six complaints received will be incorporated into the lessons learnt and will be taken into consideration when siren tests are planned in future.

Comment by Ms La Grange

Ms La Grange commended Koeberg on the good communication with regard to the siren testing. She commented on the fact that the posters were up in time, and taken down in time and that it was advertised in the local newspapers. She felt that the feedback on the siren test published in the local newspapers was a first for Koeberg, and commended Koeberg on behalf of the Melkbos Ratepayers Association.

Comment by Mr Gordon

Mr Gordon stated that he was inside his house while the sirens were being tested, and the instructions were inaudible.

Response by Mr Ntuli

Mr Ntuli confirmed that in some areas the sirens were not as audible as in other areas, which needs to be investigated.

Question by Mr Nagan

Mr Nagan queried the impact that Koeberg employees leaving for Abhu Dhabi has on the power station, and its reputation with their external stakeholders. He queried how Mr Ntuli is coping with all the negative publicity.

Response by Mr Ntuli

Mr Ntuli informed the members that he is mindful of the prevailing issues that are happening at the power station. Koeberg has a culture of transparency, and along with his management team, they talk openly about the issues and concerns that impact employees, and the power station, and open discussion. He also assured the members that the Management team strives to keep the channels of communication with staff open, and encourage two-way communication.

Mr Van Eeden responded to Mr Gordon's question

In response to Mr Gordon's question, Mr Van Eeden informed Mr Gordon that Eskom has a large role to play in the administration rules according to building regulations.

He explained that someone living in a double-glazed house would not be able to hear the sirens as they were not designed to warn people inside their houses. He also indicated that he noticed that the large solar panels on the sirens have been replaced with a smaller type, he believes does not deliver the full power that it needs as per the original design.

Response by Mr Ntuli

Mr Ntuli confirmed that all the siren issues raised have been discussed. He mentioned that alternative ways of communication are being considered, and that the members will be kept informed in order to ensure that the appropriate actions are taken.

Question by Councillor Grose

Councillor Grose congratulated Mr Ntuli and Koeberg on all their achievements, encouraged them to keep up the good work, and assured Mr Ntuli of her full support. She expressed her delight in hearing about the Koeberg desalination plant, and queried how long it will take to get the desalination plan off the ground and whether the recycled water will be used within the Koeberg area, or whether it will be made available to areas outside of Koeberg.

Response by Mr Ntuli

Mr Ntuli confirmed that the process for the desalination plant has started. A Request for Information (RFI) was sent out and received it back. He informed the members that the tender would be issued in the following two weeks, and that the first phase could potentially begin in July. In parallel, boreholes are being refurbished to ensure that everything is working. He also informed members that recycling of water will be considered going forward.

Question by Ms Nxumalo

Ms Nxumalo raised a concern about the environmental impact of the desalination on the water, and its effects on fish, and the environmental health. She enquired about the strategies and precautions that Koeberg will be employing in order to not disturb the ecosystem while producing water.

Response by Mr Ntuli

Mr Velaphi said that this was one of the reasons for questioning whether the option of the desalination plant would be pursued – Koeberg had the option to use seawater, or the aquifer. Their greatest challenge with regard to the desalination process is the amount of brine it produces. He informed the members that the amount of brine produced using the aquifer is very small compared to what is found in the ocean. He assured the members that with the outflow from the Circulating Water System there should not be any issues, and that provision has been made for this in the permit. He confirmed that the environmental impact will be very minimal and that Koeberg is comfortable to deliver the brine that result from the process.

Question by Mr Isophakis

Mr Isophakis queried where the brine that Koeberg is currently producing goes to, and where the brine that will be produced by the desalination plant will go.

Response by Mr Ntuli

Mr Ntuli advised that the same discharge currently in use at Koeberg to discharge the brine will be used, and it will be monitored from an environmental point of view.

Question by Mr Isophakis

Mr Isophakis queried whether it goes back to sea?

Response by Mr Ntuli

Mr Ntuli confirmed that it will be discharged with the Koeberg Circulating Water System.

Question by Mr Isophakis

What does the details entails?

Response by Mr Ntuli

Mr Ntuli informed the members that seven vendors responded to the Request for Information (RFI). The plan is to have a mobile unit, connect that unit, then finish stripping out the existing plant, and once ready, transfer the mobile unit into the existing plant, and make it permanent. It will be done in stages. First it has to be mobile, then transfer it permanently.

Question by Mr Slabbert

Mr Slabbert queried whether the desalination production will be limited to the plant itself, and whether the infrastructure will only support on-site supply or whether it will be able to support off-site supply as well.

Response by Mr Ntuli

The first stage will only be for on-site supply. When looking at the specification of the plant there is not a significant additional amount of capital required to get more capacity so the plan is to resize the plant once the process has been completed. Thereafter there should be a sufficient surplus of water that could be used for off-site supply. The challenges with that are the certificates, permission, and health issues that would have to be dealt with.

Response by Mr Phidza

The reason Eskom will not be supplying water from its planned Koeberg desalination plant outside of the Koeberg site, is because of the fact that the Company does not have bulk supply water license, it only has an electricity supply licence. It is because of that reason why the City of Cape Town is talking to Eskom Koeberg and the fact that the City of Cape Town has bulk water supply permit/license.

Response by Mr Ntuli

Mr Ntuli added to what Mr Phidza said, confirming that, in parallel with the City of Cape Town, Koeberg is also considering building a demonstration desalination plant at Koeberg. The City is considering the Koeberg sea water outfall because the temperature is slightly higher, which is ideal.

Question by Mr Gordon

Mr Gordon queried whether the steam from Koeberg's turbine can be recycled.

Response by Mr Ntuli

Mr Ntuli explained that Koeberg has a closed loop system - the steam is circulated within the closed system, and thus cannot be recycled.

Question by Mr Griffen

Mr Griffen queried the need for a desalination plant when Koeberg has two sources of water: the intake, as well as demineralised plant.

Response by Mr Ntuli

Mr Ntuli explained that Koeberg's demineralised water comes from the municipal supply; once received, it is treated (demineralised) to become demineralised water. The desalination plant will thus supply water to the Koeberg demineralisation plant instead of receiving water from the municipality.

7. General**Comment by Councillor Grose**

Councillor Grose enquired about the densification, coupled with the development taking place in Atlantis, asked for feedback from Disaster Risk Management (DRM) about the evacuation plan, and evacuation from Atlantis Main Road. According to her understanding, there is no plan in place and with the current development along the West Coast she asked whether there is a plan for the evacuation of the Atlantis residents.

Response by Mr Johannes (City of Cape Town)

According to Mr Johannes, Atlantis has always been part of the evacuation plan.

Response by Councillor Grose

She acknowledged that she is aware that Atlantis has always been part of the evacuation plan, however, with the densification that's in Atlantis, Charel Uys Road can no longer handle the traffic, and will no longer serve the purpose for the evacuation of the Atlantis residents.

Question by Mr Ntuli

Mr Ntuli requested clarification regarding the request for feedback on the Steam generator impact - the impact on what?

Response from Mr Phidza

Mr Phidza stated that unfortunately it was raised in the previous meeting and although he is not making an excuse, that he was not present, and that the person who raised it just said Impact on the Steam Generator Replacement.

Comment by Mr Isophakis

Mr Isophakis stated that although he did not raise the issue that there is the understanding that the steam generator is going to be replaced. Some of the members understand that it's a long process and that it would be interesting to find out about this.

Response by Mr Ntuli

Mr Ntuli queried whether it would be in order to present the Steam Generator Replacement plan, how the current Steam Generators are being managed, when it will be replaced, and what it means to Koeberg?

Response by Mr Isophakis

Mr Isophakis confirmed with a yes.

Comment from MR Makgai (NNR)

Mr Reuben Makgai –provided feedback about the NNR Exercise conducted on 16 November 2016. The report was compiled and submitted to Eskom in December 2016, and in January, the NNR requested Eskom to submit the implementation plan for the non-compliances, which was done by 31 January 2017. He explained that the intention was to present the findings and the implemented actions in this PSIF, but unfortunately, due to it not being on the agenda, it will be covered in the June PSIF.

8. Proposed agenda points for next meeting

- NNR Exercise feedback
- Feedback on the prescribed burn
- Update on the Koeberg Emergency Plan Traffic Evacuation Model

9. Date of the next meeting

The next KPSIF meeting is scheduled to take place at the Koeberg Visitors Centre from 19:00 on Thursday, 29 June 2017.

10. Closure

The PSIF meeting was adjourned at 20:05.