Koeberg Public Safety Information Forum (PSIF)

Minutes of the meeting held on Thursday, 28 March 2019

Venue: Visitors Centre, Koeberg Nuclear Power Station

Chairperson: Ms Smokie La Grange

Deputy Chairperson: Vacant

Name and Surname	Organisation	Present/ Absent
Anderson, Melville	Resident	Apologies
Bennet, George	Resident	A
Beyl, Trudy	Resident	Apologies
Boulanger, Catherine	Resident	A
Browne, Peter	Resident	P
Bruce, Peter	Resident	A
Coertzen, MPC	Resident	A
Coertzen, PZN	Resident	A
Duval, Monique	Tygerburger (Media)	A
Fiet, LK	Resident	P
Fiet, TBH	Resident	P
Graaf, Michael	Resident	A
Isophakis, John	Resident	A
Jones, Anneke	Resident	P
Jones, 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
La Grange, Smokie	Melkbosstrand Ratepayers Association	P
Leaner Natasha	Resident	P
Lingard, David	Resident	A
Mayhew, Robert	Resident	P
Mayhew, Sylvia	Resident	P
Maigrot, Cynthia	Resident	A
Maigrot, Harold	Resident	A
Marote, Michael	Atlantis Business Chamber	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	Apologies
Parker, Cheryl	Melkbosstrand Ratepayers Association	P
Rodrigues, Neil	Resident	Apologies
Scott, Peter	Resident	Apologies
Slabbert, J	Resident	P
Smith, Henry	Resident	P
Venter, Ursula	Greater Table View Action Forum	A
Williamson, Cordelia	Resident	A
Williamson, Raymond	Resident	A
Wucherpfennig, Lyn	Resident	A
Wucherpfennig, Roy	Resident	A

Officials		
Bakardien, Riedewaan	Chief Nuclear Officer - Eskom Koeberg	Apologies
Bester, Peter	National Nuclear Regulator	P
Bruiners, Roger	National Nuclear Regulator	A
de Bruin, Annelise	City of Cape Town	A
Ditlhake, Kentse	Eskom Koeberg	P
Douglas, Mehl	National Nuclear Regulator	A
Featherstone, Keith	Eskom Koeberg	P
Fisher, Jason	Eskom Koeberg	P
Flatela, Mvola	Eskom Koeberg	P
Franco, Johannes	City of Cape Town	A
Grose, Nora	Councillor – Ward 23	P
Hirachund, Antje	National Radiation Waste Disposal Institute (NRWDI)	A
Jeannes, Deon	Eskom Koeberg	P
Joshua, Debbie	Eskom Koeberg	P
Krause, Martin	Eskom Koeberg	Apologies
Kunene, Ntaoleng	National Radiation Waste Disposal Institute (NRWDI)	A
Maphoto, Katse	Department of Energy	A
Matlala, Obakeng	Department of Energy	A
Mnyanda Xolisa	Eskom Koeberg	P
Moffat, Robert	Eskom Koeberg	A
Moonsamy, Gino	National Nuclear Regulator	Apologies
Mogorosi, Tshepiso	National Nuclear Regulator	A
Mothusi, Remofilwe	Eskom Koeberg	P
Nciya, Phozisa	Eskom Koeberg	P
Ncuru, Anele	Eskom Koeberg	P
Ndomondo, Thembi	National Nuclear Regulator	A
Nhleko, Sifiso	Eskom Koeberg	P
Ntuli, Velaphi	Power Station Manager - Eskom Koeberg	A
Osman, Shireen	Eskom Koeberg	P
Phidza, Lewis	Eskom Koeberg	P
Pienaar, Shaun	Eskom Koeberg	P
Pillay, Greg	City of Cape Town – Disaster Risk Management (DRM)	P
Ramerafe, Mothusi	National Nuclear Regulator	P
Sataar, Haaroen	Eskom Koeberg	A
Silinga, Nangamso	National Nuclear Regulator	P
Skiti, Sivuyile	Eskom Koeberg	P
Stwayi, Mandisi	Eskom Koeberg	P
Thomson, Gary	Eskom Koeberg	Apologies
Tshepe, Tshakane	Department of Energy	P
Tyabashe, Loyiso	Eskom Koeberg	Apologies
Valaitham, Mahesh	Eskom Koeberg	A
Van Rensburg, Stephen	City of Cape Town	P

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: 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 metalloid which is added to the primary coolant to control reactivity in the reactor. It can also be added to 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
CNO	Chief Nuclear Officer	**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
FCs	Functional Coordinators	**CPA**	Consumer Protection Act
IPP	Independent Power Producer	**KEP**	Koeberg Emergency Procedure
SGR	Steam Generator Replacement	**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
KOU	Koeberg Operating Unit	**SABC**	South African Broadcasting Corporation

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	Megawatt. 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	The maintenance period on a power plant when a number of activities are performed on equipment that keeps the plant operating safely.	**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	**GCE**	Group Chief Executive
SSA	Sea Shore Act	**SAMGs**	Severe Accident Management Guidelines
TEM	Traffic Evacuation Model	**NERSA**	National Energy Regulator of South Africa
UAG	Unplanned Automatic Grid Separation	**Hazmat**	Hazardous material
WAC	Waste Acceptance Criteria	**FA**	Fuel Assembly

1. Welcome

Ms La Grange welcomed all the members and new members to the first PSIF of 2019. She also extended a special welcome to Melkbosstrand Councillor, Nora Grose, Mr Velaphi Ntuli, Koeberg General Manager, and the visiting students from Durham University.

2. Safety briefing

Mr Lewis Phidza, the Koeberg Stakeholder Management Manager, did the safety briefing of the venue, highlighting the safety protocols, as well as the emergency alarms at Koeberg 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. Apologies

The following apologies were tendered

- Mr Paul Naylor
- Mr Tshepiso Mogorosi
- Mr Gino Moonsamy
- Mr Melville Anderson
- Mr Neil Rodrigues
- Mr Peter Scott
- Mr Riedewaan Bakardien
- Ms Nicky Pombo
- Ms Trudy Beyl
- Mr Duval La Grange
- Mr Gary Thomson

4. Acceptance of the Minutes of the previous meeting

The Minutes of the previous meeting were proposed by Counsellor Grose and seconded by Ms La Grange.

5. Matters arising from the previous meeting

There were no matters arising from the previous meeting.

6.1 Koeberg Nuclear Power Station quarterly feedback – Mr Velaphi Ntuli (Koeberg Power Station General Manager)

The Koeberg General Manager, Mr Velaphi Ntuli, presented the standard quarterly feedback presentation and the following questions stemmed from the presentation.

Question by Mr Mayhew

Mr Mayhew enquired whether Eskom will have money to spend on correcting any significant event that threatens safety, as according to him, Eskom is bankrupt.

Response by Mr Ntuli

Mr Ntuli explained that despite Eskom's financial challenges they will have the resources to correct any significant event that threatens nuclear safety. He also added that Koeberg hasnever had an issue to spend money on the safe operation of the power station before, and confirmed that such problems currently don't exist.

Question by Counsellor Grose
Counsellor Grose enquired what the primary reason was for the delay in the casking project.

Response by Mr Ntuli
Mr Ntuli explained that Eskom employees had to demonstrate that they can perform the work safely so it took a while to generate the paperwork as it involved a long process. There were issues in the case presented by the Engineers to the Koeberg Oversight Committee. The committee felt that it did not demonstrate adequately that the work could be performed safely so they had to do some rework and address issues raised so that the work could be performed safely.

Question by Mr Swarts
According to Mr Swarts every time there's loadshedding the grid is being energised and then it is switched off. He explained that it causes explosions in the substations due to the surges, and he queried why Eskom de-energises the grid if it's already energised.

Response by Mr Ntuli
Mr Ntuli explained that the purpose for loadshedding is for Eskom to balance the demand versus the supply. He further explained that Eskom predicts what the demand would be (what the customer will be using) versus what Eskom is able to supply. If Eskom anticipates that demand cannot be met, the utility would then have then to implement loadshedding. When loadshedding takes place, the breakers are open and there is an electrical surge but the electrical protection of the system is designed in a manner that will arrest or eliminate the electrical surge. The switching off of the breakers happen as a mechanism to reduce electricity demand as a result of this, customers will be left without electricity for a short period depending on the loadshedding stage - this could range between one to four hours.

Question by Mr Mayhew
Mr Mayhew wanted to know whether Koeberg can increase its nuclear capacity to meet the need when there is a desperate need for power.

Answer by Mr Ntuli
Mr Ntuli explained that Koeberg is a base load station operating and generating 930 megawatts of power 24 hours a day, which is sent out to the grid - this is maintained on a consistent basis so it cannot be increased or reduced. Koeberg's supply is part of what constitutes the total sum of electricity available to the national grid.

6.2 Amendment to the Coastal Waters Discharge Permit (CWDP) – Mr Deon Jeannes (Eskom Nuclear Environmental Manager)
Mr Deon Jeannes informed the members that in 2012 Koeberg applied for a Coastal Coastal Waters Discharge Permit (CWDP) in terms of Section 69 of the National Environmental Management: Integrated Coastal Management Act of 2008. This was presented in the June 2016 PSIF. He explained that since then, an amendment was implemented and his presentation would highlight the amendment.

The Chairperson also informed members that the information is available at all the main local libraries, Eskom website, and the Koeberg Visitors Centre.

No questions were asked by the members.

6.3 NNR feedback on the Deputy Chair appointment – Mr Peter Bester (Programme Manager: Nuclear Power Plants – National Nuclear Regulator)

Mr Bester informed the members that the NNR have received nominations for the position of Deputy Chair for the Koeberg PSIF and that they are being processed, whereafter they will be sent to the NNR Board for a final decision.

7. General

The PSIF Chairperson - before opening the floor for the "General" agenda item - thanked Mr Phidza and Eskom for adding the proposed Melkbosstrand Erf 1694 for discussion under "General." She then opened the floor for questions and concerns from the members with regard to the proposed Erf 1694 in Melkbosstrand. The Chairperson explained that it stretches from the R27 to the Melkbosstrand High School on the west side, and from the police station in the north, running south towards the fire station. She further explained that a meeting was held on 25 March 2019 with the Mayor, Mr Dan Plato, facilitated by Melkbosstrand Ward 23 Counsellor, Ms Nora Grose, where the residents were addressed on the proposed development. Quite a number of concerns arose about the safety of Koeberg and therefore it was decided to address those concerns in the Koeberg PSIF as it was the appropriate forum for safety issues.

Question by Mr Engelbrecht

Mr Engelbrecht queried whether Koeberg was consulted about the development. He expressed a concern about the plan to accommodate the proposed number of people in Melkbosstrand. He voiced his concerned about its impact on safety and the evacuation plan, and referred to the the NNR Act, which mentions developments such as this..

Question by Mr Mayhew

Mr Mayhew asked what Would be built on the property.

Response by Ms La Grange

Ms La Grange informed the members that this was not decided yet. She explained that the EIA proposed four possibilities- all of which the residents and community found totally unacceptable.

Comment by Mr Engelbrecht

Mr Engelbrecht commented that, according to information available on the internet, the plans for flats and 50 000 low cost housing structures are already approved.

Response by Ms La Grange

Ms La Grange informed the member that she is the Chairperson of the Melkbosstrand Ratepayers Association, and that she was unaware of this. She also verified with Counsellor

Grose, as the Ward Counsellor for that area, who dispelled it as a rumour, and confirmed that no such decision has been made.

Question by Mr Swarts

Mr Swarts explained that the Old Koeberg Club/Cricket Club was up for sale and he was interested in upgrading it, but was told that it cannot be rezoned to allow more units to be erected and upgrade the premises. He was told that according the zoning laws it was zoned for a Cricket Club and cannot be rezoned for anything else. He queried whether the same principal applies in the case of Erf 1694 as it cannot be rezoned to accommodate the increase in people.

Comment by Mr Slabbert

Mr Slabbert commented that he read through the EIA in terms of the Traffic Evacuation Model and found that the population density information included in the EIA to be old and out of sync with the good information gathered by Eskom for the potential development of a new nuclear power station on the Koeberg site. He felt that there are important aspects that should be factored into the EIA.

Question by Mr Jones

According to Mr Jones, the City did not confirm the total number of residents accommodated but they referred to approxmately 1 264 dwellings. Taking the Cape Town average of 3.17 people per dwelling, this amounts to over 4 000 people - more than a third of the present size of Melkbosstand. He explained that there are two emergency radiuses for emergency responses, which are the 5 and 16km. The 5km radius has to be evacuated within four hours and the 16km radius within 16 hours, where there may not be a need to evacuate. This development is about 2km beyond the 5km radius, and the only information in the report was that it satisfied the conditions for evacuation in the 16km radius. He expressed concern that it is right on the fringe of the two roads that evacuate the 5km radius. He stated that it is the City's responsibility to drive the evacuation and that they are applying to use the land to accommodate approximately 4 000 people, and yet they failed to mention the impact on the evacuation of the 5km radius, which he felt was very irresponsible.

Response by Mr Featherstone

Mr Featherstone explained that his response is not a formal response or presentation but merely a perspective. He further explained to the PSIF members that Koeberg has been operating safely under a license issued by the NNR. The station has been operating safely because the risk of any eventuality is low, but despite its safe operation, there is a requirement in the nuclear industry that no matter the probability of an incident occurring, stations need to be prepared and take precautions for any emergency. This is the reason why an Emergency Plan exists that includes responsibilities of different roleplayers such as Eskom (the operator), the City of Cape Town, National Disaster Management, and the Provincial Government of the Western Cape who share the responsibility of preparing and managing any disaster at Koeberg. In preparing for a disaster there are two emergency zones - the 5km and 16km zones - which have specific rules that have to be applied by the City in terms of town planning and zoning as well as proposed changes. The City of Cape Town is responsible for ensuring that the rules are applied and managed in an appropriate

manner. Eskom and the NNR monitor to ensure that the rules are followed properly, and if not, they (Eskom/NNR) will object to it. In the past Eskom has taken the City to court about a decision they did not agree with, and won the case which is their role as a responsible operator. He explained that the development under discussion is a Draft Basic Assessment Report, which is out for comment and is not a formal EIA. He informed the members that Eskom cannot comment on what is being proposed at this stage as it will be speculation. He urged the members to raise their concerns and comments as this is the purpose of the Draft Assessment to gauge the opinions and information as to the thoughts and feelings of the residents about possible developments. He explained that if the process and rules are not followed properly the residents and Eskom will have to object to it.

Comment by Ms La Grange
Ms La Grange asked Mr Featherstone to respond to the question by Mr Swarts regarding the rezoning of the Cricket Club at the old Koeberg Club, which is up for sale.

Response by Mr Featherstone
Mr Featherstone explained that certain rules apply in the 5km, and in the 16km radius. He informed the members that different rules apply in the 5km and 16km zones. Zoning within the 5km cannot be changed; but zoning outside the 5km zone can be changed, provided the other requirements are met. The Koeberg Club is in the 5km radius and thus cannot be rezoned.

Comment by Mr Slabbert
Mr Slabbert enquired whether Eskom provided input irrespective of it being a Draft Assessment; especially since the impression was created that there will be a development.

Response by Mr Featherstone
Mr Featherstone explained that there is no purpose for Eskom to object to a draft EIA. He explained that Eskom can only object on the basis that the rules or processes have not been followed – no other reason.

Question by Mr Engelbrecht
Mr Engelbrecht queried whether, should the development not be according to nuclear regulation, Koeberg will launch an investigation to ensure that safety measures are adhered to. He also explained that he wanted to build a flat for his sick mother on his premises but was not granted approval for his plans by Eskom.

Response by Mr Featherstone
Mr Featherstone explained that, according to his understanding, the regulations and rules that apply in the 5km and 16km zones mean that one can do almost anything within the normal planning approvals on the existing rights on your property. The rule the City applies in the 5km is that one cannot change or increase the rights on the property. The City will consider changing rights (changing zoning) outside the 5km radius, by following an EIA. He further clarified that when it is within the current rights on the property the development cannot be stopped. Mr Featherstone also cleared the misperception of people believing that Eskom stopped a development; he explained that Eskom cannot stop any development but can only hold the City accountable in applying and following the rules and regulations.

Question by Mr Swarts
Mr Swarts asked whether the open grounds at the Cricket Club could be rezoned to include an additional structure/building only to build a few houses and leave the rest as is.

Response by Mr Featherstone
Mr Featherstone explained that it is about the property rights and what it was zoned for, which in this case was for a sports complex, and not for dwellings.

Comment by Cllr Grose
Cllr Grose explained that if anyone considers building or adding any extension to their property, they would have to enquire about the restrictions imposed with regard to zoning rights. She explained that Eskom does not approve or object to any building or development, but that the objections follow a process. She informed the members that the City cannot merely put up structures on vacant land and therefore citizens and ratepayers need to make their objections known and work through the process. She urged members not to fall prey to any speculation, and that they refrain from pointing fingers at Eskom and the NNR. She explained that the City cannot build anything where there are objections by the public.

***The PSIF Chairperson, Mrs La Grange, concluded on the matter of the proposed Melkbosstrand Erf 1694 and informed the members that this issue will only be re-entered into discussion at the PSIF, once there has been any major developments or a decision has been made which will have an impact on the Koeberg Emergency Plan. She encouraged the members to participate and engage in the Special Development application process of the proposed Melkbosstrand Erf 1694 ***

Question by Mr Mayhew
Mr Mayhew expressed concern about his personal safety. He explained that he came to the PSIF in a wheelchair and realised that there is no lighting at the bottom of the pathway to the Visitors Centre, and only lighting at the top. He was concerned about his safety when he had to leave the Forum at the end.

Response by Mr Phidza
Mr Phidza explained that a mobile light can be made available to ensure Mr Mayhew's safety when he has to use the disabled ramp at the end of the evening.

Question by Mr Fiet
Mr Fiet asked for clarity on loadshedding, querying what the rationale was behind it going from Level 2 then Level 4, then no loadshedding.

Response by Mr Featherstone
Mr Featherstone explained that the easiest way to explain loadshedding is to use a seesaw. He explained that the national electricity grid is a big electrical network but because of the number of generators generating electricity versus the number of people switching on electricity the system needs to stay balanced. He informed the members that electrically the network is spinning at 50Hz and as a seesaw Eskom needs to maintain the balance between what is generated and what is demanded, which is managed by Eskom's National Control. If there is too much generating capacity and not enough load, the frequency

increases and if there is not enough generating capacity and too much load the frequency drops. He further explained that Eskom needs to maintain their generators turning at a certain speed because if they lose the grid it becomes a nightmare to restart the grid (which happened in Venezuela recently). Therefore the utility needs to selectively remove load off the network (loadshedding) to keep the balance so that the frequency and speed of the generators can stay within the operating range that they have been designed to perform at. If it goes outside the operating range the generators will trip as a means of the protection of the electrical network. He explained that in Stage 1 only a small amount is removed, in Stage 4 they remove as much as 2 000 megawatts at any given stage which means there are possibly four fossil (coal) units not generating - each unit produces approximately 600 megawatts. Eskom also gets power from Cahora Bassa in Mozambique, and with the floods in Cahora Bassa, Eskom lost close to 1 000 megawatts. In winter the majority of Eskom power stations (units) start the season being fully maintained as Eskom does maintenance in the summer when the demand is low compared to winter demand. Loadshedding happens because Eskom does not have the generating capacity to meet the electricity demand of the country.

Question by Mr Mayhew
Mr Mayhew enquired whether Eskom still supplies neighbouring countries with electricity when the utility is loadshedding.

Response by Mr Phidza
Mr Phidza explained that as explained by Mr Featherstone, Eskom receive more than 900 megawatts from Cahora Bassa and that some neighbouring countries don't rely entirely on Eskom's electricity supply as they have their own generating capacity, with Eskom only supplying the shortfall. He further explained that the rules of loadshedding are that each customer will be impacted fairly and equitably. He explained that loadshedding is a means to protect the grid. Only key essential services are exempt from loadshedding in order to save lives.

10. Closure
The Chairperson thanked all the members for attending the PSIF meeting, and the meeting was adjourned at 20:18.

Date of the next meeting:
Thursday, 27 June 2019

Proposed topics for next meeting:
- NNR feedback on the Emergency Plan exercise findings
- Free energy