

Koeberg Public Safety Information Forum (PSIF)

Minutes of the meeting held on Thursday, 27 September 2018

Venue: Visitors Centre, Koeberg Nuclear Power Station

Chairperson: Ms Smokie La Grange

Deputy Chairperson: Natasha Leaner

Name and Surname	Organisation	Present
Anderson, Melville	Resident	A
Bennet, George	Resident	A
Beyl Trudy	Resident	P
Boulanger, Catherine	Resident	A
Bruce, Peter	Resident	A
Browne, Peter	Resident	P
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	A
Ketcher, A	Resident	A
Kleynhans, Samie	Chairperson: Melkbosstrand Community Police Forum	A
Kruger, Charmaine	Resident	P
Kruger, Willem	Resident	P
La Grange, Duval	Resident	P
La Grange, Smokie	Melkbosstrand Ratepayers Association	P
Lingard, David	Resident	A
Mayhew, Robert	Resident	A
Mayhew, Sylvia	Resident	A
Maigrot, Cynthia	Resident	A
Maigrot, Harold	Resident	A
Marote, Michael	Atlantis Business Chambers	A
Mashele, Emmanuel	Resident	P
Mashele, Rivoningo	Resident	P
Mashiase, Mahlanyane	Resident	P
McKinnell, Jennifer	Resident	A
Meyer, Carola	Resident	P
Moses, Bramwell	Resident	P
Motloane, Ntsoaki Beauty	Resident	P
Mpofu Ntabethemba Wellington	Resident	P
Nagan, Roy	Resident	A
Naylor, Paul Edward	Resident	P
Pieters, Nico	Resident	P
Rodrigues, Neil	Resident	P
Scott, Peter	Resident	P
Slabbert, J A	Resident	A
Smith, Henry	Resident	P
Venter, Ursula	Greater Table View Action Forum	A
Vollmer, Carlton	Resident	P

Williamson, Cordelia	Resident	A
Williamson, Raymond	Resident	A
Wucherpennig, Lyn	Resident	A
Wucherpennig, Roy	Resident	A
OFFICIALS		
Abrahams, Colin	City of Cape Town	A
Ata, Laurence	Eskom Koeberg	A
Ahrends, Joy	Eskom Koeberg	P
Bester, Peter	National Nuclear Regulator	P
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
Fisher, Jason	Eskom Koeberg	P
Franco, Johannes	City of Cape Town	A
Grose, Nora	Councillor – Ward 23	A
Hirachund, Antje	National Radiation Waste Disposal Institute (NRWDI)	P
Jeannes, Deon	Eskom Koeberg	A
Joshua, Debbie	Eskom Koeberg	P
Krause, Martin	Eskom Koeberg	P
Kunene, Ntaoleng	National Radiation Waste Disposal Institute (NRWDI)	A
Lavelot, Randall	Eskom Koeberg	P
Le Roux, Jurina	Eskom Koeberg	A
Leaner, Natasha	PSIF Deputy Chairperson	P
Lenders, Ricky	City of Cape Town Disaster Risk Management	A
Maphoto, Katse	Department of Energy	A
Maree, Marc	Eskom Koeberg	A
Maree, Vanessa	National Nuclear Regulator	A
Matlala, Obakeng	Department of Energy	P
Mnyanda Xolisa	Eskom Koeberg	P
Moffat, Robert	Eskom Koeberg	A
Morosi, Tshepiso	National Nuclear Regulator	P
Moonsamy, Gino	National Nuclear Regulator	A
Nciya, Phozisa	Eskom Koeberg	P
Ndomondo, Thembi	National Nuclear Regulator	A
Nicholls, Dave	Eskom Koeberg	A
Ntuli, Velaphi	Power Station Manager - Eskom Koeberg	A
Osman, Shireen	Eskom Koeberg	A
Phidza, Lewis	Eskom Koeberg	P
Phillips, C	National Nuclear Regulator	P
Pillay, Greg	City of Cape Town – Disaster Risk Management (DRM)	A
Sataar, Haaroen	Eskom Koeberg	P
Silinga, Nangamso	National Nuclear Regulator	A
Stwayi, Mandisi	Eskom Koeberg	P
Thomson, Gary	Eskom Koeberg	A
Tshepe, Tshakane	Department of Energy	P
Tyabashe, Loyiso	Eskom	A
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
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 mollusks. 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
FCs	Functional Coordinators	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
KOU SGR	Koeberg Operating Unit Steam Generator Replacement	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	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		
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
GCE	Group Chief Executive		

1. Welcome

The PSIF Chairperson, Ms Smokie La Grange, welcomed all the members to the PSIF Meeting.

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 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

Counsellor Nora Grose

Mr John Iosophakis

Mr Mellville Anderson

Mr David Lingard

Mr Stephen van Rensburg

Mr Velaphi Ntuli

Mr Dave Nicholls

Mr Gary Thomson

Ms Shireen Osman

Mr Greg Pillay

Mr Keith Featherstone

Mr Roy Nagan

4. Acceptance of the Minutes of the previous meeting

Minutes were proposed by Mr Naylor and seconded by Mr Peters.

5. Matters arising from the previous meeting

There were no matters arising from the previous meeting.

6.1 Koeberg Nuclear Power Station quarterly feedback – Ms Bravance Mashele (Acting Koeberg Power Station Manager)

Ms Mashele informed the members that she was standing in for Mr Ntuli, Koeberg's Power Station Manager/General Manager as he was on sick leave.

Question by Mr Naylor

Mr Naylor expressed concern about the rusted roof discussed in the quarterly feedback. He wanted to know whether any inspections or maintenance have been conducted.

Response by Ms Mashele

Ms Mashele explained that the rusted roof was not due to a lack of maintenance but it was due to corrosion as a result of the environment and constant rainy weather as well as incorrect maintenance on that particular roof. The corrective action

implemented was to inspect and assess the condition of all the roofs on the power station and to ensure the correct maintenance is done.

Question by Mr Mayhew

Mr Mayhew expressed concern about why the Koeberg waste truck was held back.

Response by Ms Mashele

Ms Mashele explained that it had to meet the requirements from the National Nuclear Regulator before approval could be given.

Question by Mr Mayhew

Mr Mayhew asked whether the waste was stored on site prior to transportation.

Response by Ms Mashele

Ms Mashele responded that only a limited amount are stored on site - the rest are transported in steel and concrete drums as part of the mitigation.

Question by Mr Scott

Mr Scott recalled that steel drums were routinely transported to Vaalputs. He wanted to know what caused the delay, how it was handled and whether there will be further delays.

Response by Ms Mashele

Ms Mashele explained that there was a design issue with the drums, which has been subsequently resolved. She confirmed that there should not be any issues going forward.

Question by Mr Scott

Mr Scott wanted to know if there was a design issue with some of the drums, whether that also applied to the other drums already transported and whether it did not pose a nuclear safety risk.

Response by Ms Mashele

Ms Mashele explained that all the drums met the specified design standard/criteria. Due to the old standard improving, they had to move to the new and improved standard which is the current/latest standards. The drums were never non-conforming according to the old standard, it was only as a result of the design standard changing that caused the non-conformance to the new design standard.

Response by Mr Bester

Mr Bester from the NNR explained that what lead to this was that the Vaalputs Waste Acceptance Criteria changed which required regulatory approval based on the new design. This took time due to changing paperwork and administration and logistical arrangements/changes. The drums met the standard it just had to meet the current/new standard.

Question by Mr Scott

Mr Scott commented that the outage duration is quite long and what will be included in this Outage that is out of the ordinary scope of work.

Response by Ms Mashele

Ms Mashele explained that the outage is long due to it being a maintenance and refueling outage. She informed the member that the refueling outages are short and that the maintenance outages are longer due to all the work being done. She further explained that there's nothing out of the ordinary scope of work that is scheduled to be done and that the only deviation from normal maintenance, is the installation of the Reactor Cavity and Spent Fuel Pool Cooling (PTR) tank that was scheduled for this outage.

Question by Mr Mayhew

Mr Mayhew enquired about the Emergency Plan exercises and expressed concern in that all objectives reported have been met. He felt that it is unusual for all objectives to be met in all exercises and questioned why the NNR couldn't find anything amiss.

Response by Ms Mashele

Ms Mashele explained that they are still awaiting the final NNR Report where the Areas of Improvement and findings will be presented, which will probably be presented in the next PSIF meeting. She also explained that all the other three exercises were internal exercises and that all objectives were met. She concluded by explaining the criteria that are used to evaluate exercises against objectives.

Question by Mr Mayhew

Mr Mayhew wanted to know whether the exercises were planned and scheduled and whether the staff knew it was coming or whether they were taken by surprise.

Response by Ms Mashele

Ms Mashele explained that the dates of the exercises are scheduled and planned and staff are informed about it ahead of time, but that the scenario/content is not known beforehand.

Comment by Mr Fisher

He informed the members that the Emergency Response Organisation (ERO) staff are not aware of the time of when the exercise will commence as well as the details of the scenario/content. He explained that out of a fleet of 100 objectives, 50 objectives will be selected. The selected objectives for all three internal exercises were met with minor observations, and no major findings.

Question by Mr Mayhew

Mr Mayhew expressed concern about the *AT Risk Areas For Improvement (AFIs)* on the WANO (World Association of Nuclear Operators) Mid-Cycle Peer Review presentation.

Response by Mr Phidza

Mr Phidza explained that that involves the oversight of training which relates to training observations and guided by WANO (World Association of Nuclear Operators) industry best practice. He concluded by explaining the importance of such management training observations.

Question by Mr Scott

Mr Scott asked whether they were in a better position to review what the causes were and how they are going to correct it.

Question by Mr Tshepe

The member questioned what is meant by “important core processes” (as per WANO Mid-Cycle Review Slide 15).

Response by Ms Mashele

Ms Mashele explained that when WANO does follow-up assessments they usually focus on the last six months. Observing training forms part of the oversight role - this is regarded by WANO as an important core process as it forms part of the global WANO Criteria.

Question by Ms La Grange

Ms La Grange queried what is meant by a scaffolding ledger, as one of the LTIs (Lost Time injuries) presented referred to an incident involving a scaffolding ledger.

Response by Ms Mashele

Mr Mashele informed Ms La Grange that it is a scaffolding pipe.

Question by Mr Pieters

Mr Pieters expressed concern because of the four At Risk actions/AFIs and three satisfactory AFIs viewed on the presentation.

Response by Ms Mashele

Ms Mashele explained that there's Programmes put in place to manage the leaks and that they are in a process of reviewing all their plant vulnerabilities.

Question by Mr Mayhew

Mr Mayhew wanted to know what the term, *eliminate or mitigate known equipment challenges*, which is also highlighted in the presentation as an AT Risk item mean.

Response by Ms Mashele

Ms Mashele explained the criteria for evaluating and managing leak rate and the potential of what can happen if necessary mitigation plans are not in place. She further explained that once issues are picked up, often whilst looking at mitigation, and they haven't had a chance to be fully implemented, is when failure happens.

Question by Mr Mayhew

Mr Mayhew wanted to know whether it will be looked at and whether it will be looked at before the outage starts.

Response by Ms Mashele

Ms Mashele informed the member that it is part of the operational plan and that the plan was to implement it before the outage however it didn't work out that way.

Comment by Mr Phillips (NRR)

Mr Phillips felt that there's a need for more detailed information to be provided when presenting these types of information, and that concrete actions of what Koeberg is employing to address the *AT Risk* actions to be presented. He also felt that more time needs to be spent on the background and unpacking what the terminology meant and how it relates to the action attached to it. He suggested that Koeberg informs the public about the open actions and how they plan to address it. He suggested that it be added as part of the next PSIF agenda.

Response by Ms Mashele

Ms Mashele acknowledged the comment. She suggested that it could possibly be considered as an Agenda item under the WANO AFI Recovery Plan, when presented at the PSIF. She concluded by indicating that the background information was presented in the previous PSIF meeting, hence the feedback for that area was specific and brief.

Question by Mr Naylor

Mr Naylor asked that the abbreviations be explained in the presentations.

Comment by Mr Mogorosi

Mr Mogorosi suggested that the information be backed up with scientific data with regards to regulatory limit and that comparisons/graphs be done so as to substantiate the data.

6.3 Spent Fuel Cask Project update by Mr Haaroen Sataar**Question by Mr Mayhew**

Mr Mayhew wanted to know how many casks are on site.

Response by Mr Sataar

Mr Sataar confirmed that the total count in the number of Spent Fuel Assemblies (SFAs) that are loaded into casks is 112 (28x4). Three (3) new metal casks was also delivered to the Koeberg site. These casks are currently empty and can store 32 SFAs per cask.

Question by Ms La Grange

Ms La Grange enquired where the casks were manufactured.

Response by Mr Sataar

Mr Sataar responded that it was manufactured by Holtec in the USA.

Question by Mr Mayhew

Mr Mayhew wanted to know that since this is a temporary storage, where they will be moved to.

Response by Mr Sataar

Mr Sataar explained that they are building a transient Interim storage facility locally and they are considering an off-site facility. One of the sites they are considering is Vaalputs. He also added that the building of a Centralised Interim Storage Facility (CISF) is the responsibility of the Radwaste institute.

Question by a member

The member enquired about radioactivity of the casks.

Response by Mr Sataar

Mr Sataar explained that it was designed to host spent fuel assemblies and that you can walk around the assemblies and you can enter the building without being exposed. He further explained that this is an international practice.

Question by Mr Browne

Mr Browne explained that the fuel is safer in the casks than in the Spent Fuel Pool and it is below regulatory limits.

Comment by Mr Naylor

Mr Naylor commented that he is under the impression that no spent fuel was ever sent to Vaalputs.

Response by Mr Sataar

Mr Sataar confirmed that the only Koeberg spent fuel that ever left the site was a few elements that were transported to Necsa in Pretoria in the 1990s for reprocessing.

Question by Mr Naylor

Mr Naylor wanted to know whether it's not bad planning to have a 30-year old plan but it seems like a contingency has only been put into place now.

Response by Mr Stwayi

Mr Stwayi explained that the role of the Radwaste Institute and how they fit into the plan should be understood.

Response by Mr Sataar

Mr Sataar explained that it is industry best practice to store spent fuel temporarily on site and later consider reprocessing or offsite storage. This is done to propel spent fuel cooling and safe movement of fuel.

Response by Mr Phidza

Mr Phidza explained that Waste Management Strategy Presentation was presented at one of the PSIF meetings and suggested that it should possibly be done again outlining the key role players and where they fit into the plan.

Question by Mr Mayhew

Mr Mayhew wanted to know how difficult it is to get the fuel out of the spent fuel pool and into the casks.

Response by Mr Sataar

Mr Sataar explained that the preparation for the casks and the cask loading are done under water and in a manner that does not impact the workers. He further explained that fuel cannot be moved into casks without NNR approval of Cask Storage Building (CSB) design. He said that concerns regarding the safety of the Cask Storage Building (CSB) are captured in the safety case.

Question by Mr Scott

Mr Scott expressed interest in the kinds of hazards Koeberg tests their structure against in order to present the safety case.

Question by Mr Mayhew

Mr Mayhew wanted to know why the fuel assemblies cannot be placed next to each other.

Response by Mr Sataar

Mr Sataar explained that it is due to the burn rate and that inserts are placed in the open spaces.

Question by Ms Meyer

Ms Meyer wanted to know what the rods are made of.

Response by Mr Bester

Mr Bester explained that it is made of a zircaloid cladding/indium alloy similar to the control rod material.

6.3 Koeberg Life Extension Project presentation by Ms Bravance Mashele

Due to time constraints, it was decided to move the Koeberg Life Extension Project Presentation to the next PSIF

7. General**Question by Mr Mayhew**

Mr Mayhew whether Koeberg is going for desalination or going back to using reservoir water considering that we are still under 5B water restrictions.

Response by Mr Phidza

Mr Phidza explained that they said they will contract and run it for a year after which they will focus on the lessons learnt before embarking on building a permanent desalination plant. He further explained that the presentation in the March PSIF meeting communicated that they will assess the situation and if the water situation improves, they will do due diligence on the permanent desalination plant. They will need time to collect data as the contract was only valid for a year which recently came to an end.

Question by Mr Mayhew

Mr Mayhew wanted to know why the desalination plant was cancelled considering that it will relieve the strain on reservoir water and especially considering that rainfall pattern for the next year is not known.

Question by Mr Phidza

Mr Phidza explained that it was deferred as they needed to do a detailed project impact analysis.

Question by Mr Scott

Mr Scott explained that in his understanding the intention for Koeberg was to become independent from municipal supply and whether that is still the intent.

Response by Mr Phidza

Mr Phidza explained that although the rainfall in the Western Cape improved, the Koeberg strategic water plan has not changed.

Question by Mr Scott

Mr Scott commented that we are not going to have an abundance of water in the future and whether it is still Koeberg's intention to be independent from municipal water supply.

Response by Mr Stwayi

Mr Stwayi explained that the temporary desalination contract came to an end and nothing changed besides the contract ending.

Response by Mr Phidza

Mr Phidza explained that under the current conditions it is not feasible to extend the temporary desalination plant contract as this will currently have a negative impact on the price of electricity.

Comment by Mr Browne

Mr Browne explained that he lives 300m away from a Public Address System that announces when people trespass along the beach. He says that it goes off at 01:00 and 03:00 and the message is repeated often for an hour which becomes annoying. He says he knows it's important but appealed to Eskom to please take note of it and especially focus on the repeat messages.

Question by Mr Naylor

Mr Naylor raised a concern with regards to the poles and steel cables cordoning off the beach area that is not visible from a distance and can only be seen at about 2 meters. His concern was that someone could be decapitated as a result of this. He suggested fluorescent buoys/balls to be strung along the cables for better visibility and to prevent any unfortunate incidents.

Comment by Mr Mogorosi (NNR)

Mr Mogorosi informed the members that the term of office for the PSIF Deputy Chairperson has expired and that an advert will soon be featured in the local newspapers.

Comment by Ms La Grange

Ms La Grange asked the current Deputy Chair, Ms Leaner, whether she is interested to stand as Deputy Chair for another term, and she agreed.

Date of next meeting:

The next PSIF meeting will take place at the Koeberg Visitors Centre on Thursday, 29 November 2018.

Proposed topics for next meeting:

- Feedback from NNR Exercise
- Power Station life extension Project

10. Closure

The Chairperson thanked all the members for attending the PSIF meeting. The meeting was adjourned at 21:10.