

Koeberg Public Safety Information Forum (PSIF)

Minutes of the Meeting held on 28 November 2013

Venue: Nuclear Auditorium, Bulk Stores, Koeberg Nuclear Power Station

Chairperson: Ms Smokie La Grange

Deputy Chairperson: Vacant (announced on 28 November 2013)

Attendance list				
Name and Surname	Organisation	Present	Absent	Apologies
Adair, Gaynor	Resident		A	
Adair, Rosemary	Resident		A	
Alias, L	Resident		A	
Arries, S	Resident		A	
Baker, Alto	Resident		A	
Bevan, Cynthia	Resident		A	
Christa Kleynhans	Resident	P		
Botes, Maralise	Resident		A	
Boulanger, Catherine Irene	Resident	P		
Braswell, Jackie	Resident		A	
Brown, Mike	Resident		A	
Brown, Clare	Resident		A	
Browne, Peter	Resident	P		
Cannel, Roger	Resident		A	
Clayton, Cynthia	Resident		A	
Cloete, Priscilla	Resident		A	
Christian, Eric Dominique	Resident		A	
Cwaile, Tshepo Shane	Resident		A	
Dampies, Jeremiah	Resident		A	
De Waal, Daniel	Resident		A	
Dobson, Clive	Resident		A	
Ducase, Daryl	Resident		A	
Fritz-Whyte, Amanda	Resident		A	
Gelant, Alida	Resident		A	
Handt, Brema	Resident		A	
Henstock, WT	Resident		A	
Hotten, Alexandra	Resident		A	
Iosiphakis, John I	Resident			Apologies
Jansen van Vuuren, Marissa	Resident		A	
Jansen van Vuuren, Elzeth	Resident		A	
Jentu, Mwezi	Resident		A	
Johnson, Kurt	Resident		A	
Johnson, Teresa	Resident		A	
Kleynhans, Christa	Resident	P		
La Grange, Duval	Resident	P		

Laing, Brett	Resident		A	
Lategan, Peter	Resident		A	
Lee, Nick	Resident		A	
Lewies, Ben	Resident	P		
Lingard D	Resident		A	
Luhanga, Peter	Resident		A	
Macalex, Justin	Resident		A	
Mack, Cyril	Resident		A	
Manguwo, L	Resident		A	
Maigrot ,Mr	Resident	P		
Maigrot, Mrs	Resident	P		
Maree, B	Resident		A	
Mayhew, Robert	Resident	P		
Mayhew, Sylvia	Resident	P		
Meyer, Yolande	Resident		A	
Meyrick, MAC	Resident		A	
M'Gill Grant	Resident		A	
Mvunelwa, Maphelo	Resident		A	
Nagan, Roy	Resident		A	
Odendaal, WJ	Resident		A	
Olifant, Danny	Resident		A	
Opperman, Elbe	Resident		A	
Opperman, Francois	Resident		A	
Payne, Samantha-Ann	Resident		A	
Pereira, Jose LF	Resident		A	
Perold, Arthur James	Resident		A	
Piloso Mogale, Wilson	Resident		A	
Pombo-van Zyl, Nicolette	Resident	P		
Rass, Barbara	Resident		A	
Rass, Wendy	Resident		A	
Radmyn, Dave	Resident		A	
Richards, Ananda	Resident		A	
Rothen, Ueli	Resident		A	
Simon, Mark	Resident		A	
Slabbert, J A	Resident		A	
Smith, Henry	Resident		A	
Siyo, Phinda	Resident		A	
Storah, Unis	Resident		A	
Taylor, John	Resident			Apologies
Thear, HT	Resident		A	
Thomas, Daniël	Resident		A	
Longden-Thurgood, M	Resident		A	
Van Der Merwe, Andre	Resident	P		
Van Schalkwyk, Whelmi	Resident		A	
Van Schalkwyk, J	Resident		A	
Werth, S	Resident		A	
Wetter, Chris	Resident		A	
White, Harry	Resident		A	

Wilkinson, David	Resident		A	
Wilkinson, Donree	Resident		A	
Williamson, Raymond (Mr.)	Resident			Apologies
Williamson, Mrs	Resident			Apologies
Wilson, BSJ	Resident	P		
Wilson, D	Resident	P		
Wilson, Tug	Resident		A	
Wilson, S	Resident		A	
Windvogel, Raybin	Resident		A	
Officials				
Bakardien, Riedewaan	Eskom Holdings SOC Limited	P		
Featherstone, Keith	Eskom Holdings SOC Limited	P		
Herbert, Michelle	Worley Parsons, RSA (Pty) Ltd	P		
Hill, Tim (Dr)	National Nuclear Regulator		A	
Jeannes, Deon	Eskom Holdings SOC Limited	P		
Joshua, Debbie	Eskom Holdings SOC Limited		A	
Kgomo, Ditebogo	Department of Energy		A	
Kline, Kim	Eskom Holdings SOC Limited		A	
La Grange, Smokie	PSIF Chairperson	P		
Makgae, Reuben	National Nuclear Regulator		A	
Makhathini, Simphiwe	Department of Public Enterprises (DPE)		A	
Majola, Vanessa	NNR Koeberg Site Office		A	
Maphoto, Katse	Department of Energy		A	
Mnisi, Bongani	City of Cape Town		A	
Moonsamy, Gino	National Nuclear Regulator	P		
Nhleko, S (Dr)	National Nuclear Regulator		A	
Nicholls, Dave	Eskom Holdings SOC Limited – General Manager (Nuclear Engineering)	P		
Phidza, Lewis	Eskom Holdings SOC Limited	P		

Pillay, Greg	City of Cape Town	P		
Pienaar, Shaun	Eskom Holdings SOC Limited	P		
Powell, Charlotte	DRMC – City of Cape Town		A	
Radebe, Phindile	Eskom Holdings SOC Limited	P		
Saaymans, Martin	Eskom Holdings SOC Limited		A	
Schrönen, Arno	CoCT Traffic Services	P		
Seitse, Victoria	National Nuclear Regulator	P		
Spotten, John	City of Cape Town		A	
Stevens, Vicky	Worley Parsons RSA (Pty) Ltd	P		
Steyn, Elmien (Dr.)	City of Cape Town			Apologies
Trollope, Ian	Eskom Holdings SOC Limited	P		
Tselane, Thabo	National Nuclear Regulator		A	
Tsebe, Andretta	Department of Public Enterprises (DPE)		A	
Tyobeka, Bismark (Dr.)	National Nuclear Regulator (CEO – 2013)		A	
Van Schalkwyk, Johannes	SAPS			Apologies
Van Rensburg, Stephen	Head: Area North Disaster Risk Management Centre	P		
Van Vuuren, Charles	Law Enforcement	P		
Xaso, Simphiwe	Eskom Holdings SOC Limited		A	

Abbreviation/definition list			
Abbreviation	Description	Abbreviation	Description
KNPS	Koeberg Nuclear Power Station	CoCT	City of Cape Town
KOU	Koeberg Operating Unit	IAEA	International Atomic Energy Agency
NNR	National Nuclear Regulator	DOC	Disaster Operations Centre
KPSIF	Koeberg Public Safety Information Forum	SABC	South African Broadcasting Corporation
ISO	International Standards Organisation	mSv	MilliSieverts
PSM	Power Station Manager	EP	Emergency Plan
SAPS	South African Police Service	UPZ	Urgent Protective Action Planning Zone
MW	Megawatts	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
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
Emergency Plan	A document describing the organisational structures, its roles and responsibilities, concept of operation, means and principles for intervention during an emergency	Plant	Nuclear Power Station with associated components, machinery, equipment or devices
PAZ	Precautionary Action Zone	National Electricity Grid	The network of high-voltage power lines between major power stations
LTI	Lost Time Injury	WANO	World Association of Nuclear Operators
NSRB	Nuclear Safety Review Board	Radiation	Energy released in the form of particles or electromagnetic waves during the breakdown of radioactive atoms.

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
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
FCs	Functional Co-ordinators	EPSOC	Emergency Planning Steering and Oversight Committee
TEM	Traffic Evacuation Model	SAMGs	Severe Accident Management Guidelines
EPZ	Emergency Planning Zone	UPZ	Urgent Protective Action Zone
SHEQ	Safety Health Environment and Quality	KCWIB	Koeberg Cooling Water Intake Basin

1. Opening and welcome

The Chairperson welcomed everyone to the Meeting.

2. Safety briefing

Mr Shaun Pienaar conducted the safety evacuation briefing, informing members about the safety protocol of the venue.

3. The following apologies were tendered (November 2013)

- Dr Elmien Steyn (City of Cape Town)
- Mr Johannes van Schalkwyk (SAPS)
- Mr Ray Williamson
- Mrs Williamson
- Mr John I Iosiphakis
- Mr John Taylor

4. Acceptance of the Minutes of the Previous Meeting (September 2013)

The Minutes were accepted by Mr Mayhew and seconded by Mr Maigrot.

5. Matters arising

Suggestion by Mr Mayhew

Mr Mayhew suggested that the list of abbreviations at the back of the PSIF minutes move to the front for ease of reference.

Response by the Chairperson

The Chairperson acknowledged this as a good point and indicated that this will be implemented in the next Minutes, as agreed by the members.

6. Koeberg Quarterly Feedback - Mr Riedewaan Bakardien Koeberg Power Station Manager

Fourth quarter feedback

Summary

Unit 1

- Mr Bakardien reported that due to an earth fault on the turbine lubrication pump the Unit 1 turbine was manually tripped on 23 October 2013. This occurred on the non-nuclear side of the plant. However, the turbine is regarded as a significant component and any threat to this is taken very seriously, hence the decision was taken to trip the unit, which was returned to service 2.5 days later, once all the repairs had been effected.

- Unit 1's 20th outage (Outage 120) commenced on 11 November 2013, and the unit is planned to be returned to service on 24 December 2013 (43 days). 12 000 activities will be completed during this outage and the scope is as follows:
 - Refuelling the reactor and replacing a leaking fuel element (very small leak as indicated by radiochemistry results)
 - Comprehensive Steam Generator tube inspections
 - Modifications to the station's radiological monitoring system and main steam safety valves

Unit 2

- Unit 2 has remained at 100% power for the last quarter.
- There are no nuclear safety concerns. However, there is continuous monitoring of an oil leak on the Generator Excitation Transformer, which will be repaired during Outage 220 (planned start date: 24 March 2014).

General plant

- Koeberg Nuclear Power Station's accumulated 12 month dose has declined to its lowest level in five years in November 2013, which is a result of some of the interventions introduced to reduce dose to the employees.
- The National Electricity Grid has become extremely tight – consumers are requested to use electricity sparingly.
- Station focus: the safe operation of Unit 2 and the safe return to service of Unit 1, following the current outage. Additional measures are taken during an outage to safeguard the running unit, including barricading to separate the two units.
- The station has achieved 2 million injury-free hours, reflecting a big improvement in industrial safety at the station.
- A nuclear safety culture awareness campaign, based on the nuclear safety culture traits developed by the World Association for Nuclear Operations (WANO) is being rolled out. This is aimed at further emphasising the nuclear safety message at the station.
- A new safety oversight body, the Nuclear Safety Review Board (NSRB) was established in November 2013 to provide additional oversight of Koeberg's safety performance to the Eskom Board.

Question by Mr Mayhew

Mr Mayhew asked how many people serve on this board (NSRB), what their experience is, what their mandate is and how often they meet.

Response by Mr Bakardien

Mr Bakardien responded that there are four international members, with a vast amount of nuclear generation experience. All of them have previously held various senior management positions at either power station level or higher, i.e. WANO and IAEA. They meet on a six-monthly basis, in sync with the Eskom board meetings and

their mandate is to independently review Koeberg's Nuclear Safety performance and present their findings/recommendations directly to the Eskom board.

7. NNR feedback on PSIF Deputy Chairperson position – Mr Gino Moonsamy (NNR)

Summary

- Mr Moonsamy provided a brief background on the objectives of the PSIF. He applauded the Koeberg PSM for fulfilling the PSIF mandate, by sharing information pertaining to nuclear safety, emergency planning and radiation safety transparently.
- He reiterated that the PSIF is a legislated forum governed by the NNR Act No 47 Section 26(4) of 1999 which requires that the NNR Board appoints both the PSIF Chairperson and Deputy Chairperson. Mr Moonsamy announced the appointment of Mrs Christa Kleynhans to the position of Deputy Chairperson of the Koeberg PSIF and confirmed her acceptance of the position.
- In his conclusion, Mr Moonsamy commended the Chairperson, Eskom and members of the forum on the improvement in the standard of the PSIF and the improved manner in which the meeting has been conducted. This gives the NNR the assurance that the needs of the members of the public and the mandate of the forum have been fulfilled.

8. Integrated Koeberg Nuclear Emergency Plan: Public notification and road blocks – CoCT Law Enforcement (Mr Charles van Vuuren) and Traffic Services (Mr Arno Schrönen)

Summary

Mr Arno Schrönen and Mr Charles van Vuuren shared the key functions of the CoCT Law Enforcement and Traffic Services in the event of a nuclear emergency at KNPS.

They are as follows:

- Public notification and implementation of instructions from the CoCT Disaster Risk Management Coordination Centre.
- Traffic management and law Enforcement
- Broadcasting of key evacuation information by means of vehicles equipped with a public address system, more especially in farm areas and informal settlements.
- Implementation of road blocks and assisting with evacuations, by providing assistance to SAPS and law enforcement agencies.
- Coordinating and escorting busses to Mass Care Centres.
- Ensuring maintenance of law and order in the Mass Care Centres.

Question by Mr Mayhew

Mr Mayhew asked whether the Traffic Services officials are adequately informed and aware of the expectations in the event of a nuclear emergency.

Answer by Mr Schrönen

Mr Schrönen responded that it is their core function in an emergency.. He added that they have worked well with Eskom with regard to educating Traffic Services staff about nuclear. This is an ongoing process so as to cater for new recruits as well.

Question by Mr Mayhew

Mr Mayhew asked whether officials at the Parklands SAPS office would be able to answer questions with regard to their function in a nuclear emergency should he ask them.

Answer by Mr Schrönen

Mr Schrönen said that he cannot answer for SAPS but that he could answer for Traffic Services. They (Traffic Services) would be able to answer questions relating to the basic requirements of their function but not with regard to the technical side of the function.

Comment by Mr Trollope

Mr Trollope added that Eskom has been paying attention to what comes out of the KPSIF meeting, hence, in a combined effort with Disaster Management, Eskom now has a dedicated person joining Mr Van Rensburg from the CoCT in visiting various institutions (i.e. SAPS stations, schools etc.) once a week to educate and provide awareness training.

Response by Mr Mayhew

Mr Mayhew responded that this is a positive step because if people do not know what they're doing they won't be able to perform their jobs. He added that their priorities might change if their family is involved.

Comment by Mr Schrönen

Mr Schrönen responded by saying that he can guarantee that Traffic Services will confidently carry out their duties when called upon in an emergency.

Comment by Mr Trollope

Mr Trollope added that he can vouch for the Traffic Services. Eskom trains approximately 250 traffic officers per year who participate in the annual NNR Station Exercise where they are trained with the dosimetry that they are required to wear in case of an emergency at Koeberg. He added that he is satisfied that they are aware of their duties.

Question by Chairperson

The Chairperson made a request that the word "Koeberg" should not be associated with the word "explosion". She further explained that the design of Koeberg is such that an explosion cannot take place.

Question by Mr Mayhew

Mr Mayhew asked how Traffic Services will deal with residents who want to go home to fetch their families during a nuclear emergency, as this will cause vehicle accidents.

Response by Mr Schröen

Mr Schröen responded that he is confident that they can handle this type of situation. The situation will be assessed with the guidance of the Disaster Management team.

Question by Mr Mayhew

Mr Mayhew asked about the possibility of road accidents and deaths.

Answer by Mr Schröen

Mr Schröen responded that this is a possibility in any situation, and that should something happen, they plan around this in order to allow for traffic to continue flowing as soon as possible.

Comment by Mr Pillay

Mr Pillay added that the CoCT Traffic Evacuation Model (TEM) makes provision for different traffic scenarios such as one-way, two-way and roadblocks.

Comment by Chairperson

The Chairperson commented that presentations around such questions have been done before and that she finds it reassuring that the SAPS and Traffic Services are working together with Eskom.

9. Environmental Management Plan (EMP) for maintenance dredging of the water intake basin at Koeberg – Ms Vicky Stevens – Worley Parsons (RSA) Pty Ltd

Summary

The EMP outlines the procedures that control the manner in which Koeberg and the appointed Dredging Contractor/Operator undertake the various activities associated with maintenance dredging of the Koeberg Cooling Water Intake Basin (KCWIB). The objective is to ensure the implementation of the Koeberg Nuclear Power Station's (KNPS) Safety Health, Environmental and Quality (SHEQ) Policy during these activities.

The EMP has been developed to identify and address the requirements for the management and mitigation of environmental impacts of the maintenance dredging and associated activities through all the phases (i.e. mobilisation, operation and demobilisation) of the project.

The presentation provides stakeholder with the opportunity to raise any issues related to the project as part of the public participation process. The final EMP is to be submitted to the Department of Environmental Affairs for approval.

The main function of the cooling water intake basin is to:

- Acts as a sediment settling basin.
- Allows Koeberg to withdrawal sediment free seawater for power station cooling.
- The seawater needs to be sediment free to prevent abrasion to the:
 - The abstraction pumps.

- The condenser tubes
- Settling of sand in plant systems

Why is dredging required?

- Approximately 132 000m³ of sediment is dredged annually from the KCWIB in order to maintain the depth of the basin. The purpose of the EMP is to ensure this maintenance dredging is in line with Eskom's Environmental policy-striving towards zero harm to the people, plant and the Environment.
- Dredging is a maintenance activity required at Koeberg, as the rate of sedimentation within the intake basin is on average approximately 132 000 m³ per year (due to the high level of wave energy on this coast, and the high cooling water flow rates).
- The inner basin is permitted to accumulate 300 000 m³ to 400 000 m³ of sediment.
- The inner basin is surveyed regularly to ensure that the amount of accumulated sediment on the bottom of the basin does not exceed the permitted amount.
- The surveys also show the priority areas of the basin that need to be dredged.
- The dredge spoil is deposited south of the outlet basin through a pipeline into the surf zone.
- Acts as a by-pass system.

Question by Mr Mayhew

Mr Mayhew asked whether dredging is done only once a year.

Answer by Ms Stevens

Ms Stevens responded that it is conducted as and when needed. The threshold for sedimentation in the intake basin is the indicator that is used to determine when dredging is required.

Question by Mr Mayhew

Mr Mayhew asked what the timescale is.

Answer by Mr Trollope

Mr Trollope responded that it varies as dredging could take up to six months.

Comment by Mr Nicholls

Mr Nicholls added that the amount of sand that is allowed to accumulate in the basin equivalent to the size of a super tanker of sand.

Question by Mr Mayhew

Mr Mayhew asked whether hot water is returned into the basin.

Answer by Ms Stevens

Ms Stevens responded that it is not returned to the intake basin but is discharged through the outfall.

Comment by Mr Jeannes

Mr Jeannes added that the design is such that the heated water does not return into the intake basin.

Question by Chairperson

The Chairperson asked who the contact person was for the long-term monitoring programme that takes place at Ou Skip.

Response by Mr Jeannes

Mr Jeannes responded that this is on a contractual basis with the relevant department at UCT. He elaborated that there isn't a permanent person at the facility however every six months the team goes to the beach area near the Koeberg outfall and measure the amount of living organisms (mussels: indicative species) per square metre, as this gives an indication of the trends in the environment.

Additional Note: The contract with UCT has expired. Koeberg is in the process of getting a contract in place with the University of Stellenbosch (US) for the long-term monitoring.

Comment by Ms Stevens

Ms Stevens added that currently the long-term monitoring programme is used to monitor temperature. It is her recommendation that it be used in conjunction with the dredging records, as Ou Skip is located 800 m to the south of the dredge spoil disposal site. The long-term monitoring programme's data can therefore be used in conjunction with the dredging records to monitor the impact of the deposition of the dredge spoil on Ou Skip's sandy beach.

Question by Mr Van Vuuren

Mr Van Vuuren asked whether there is a possibility for the warm water to drift to the Melkbosstrand Beach.

Answer by Mr Trollope

Mr Trollope responded that there is approximately a 9°C difference in water temperature directly at the outfall. When the warm water leaves the outfall its heat dissipates within approximately a half kilometre as it mixes with the water in the ocean.

Comment by Mr van Vuuren

Mr Van Vuuren added that during the bolt incident at Koeberg, it was reported that the warm water had spread to Melkbosstrand Beach.

Answer by Mr Featherstone

Mr Featherstone explained that Koeberg has an operating limit where the water is not allowed to be warmer than 23°C. Koeberg has come close to shutting down twice in the last five years due to the water temperature being close to reaching that limit. The increase in temperature beyond the limit is as a result of the wind direction, which is impacted by the weather conditions. If the wind direction remains in a North Westerly direction for a prolonged period at the wrong time of the year, it keeps the warm water in the basin. This is as a result of the weather conditions, not the output from Koeberg.

Comment by Mr Nicholls

Mr Nicholls said that there is no effect on the ocean. A lot of studies have been conducted with the new build plant, even those five times the size of Koeberg, the change in temperature is trivial when compared to normal variations.

Request by Chairperson

The Chairperson suggested that a representative from the UCT Marine Department address the PSIF members at one of the future KPSIF meetings.

Response by Mr Phidza

Mr Phidza responded that he will engage them and check their availability for the March or June 2014 PSIF Meeting.

10. General**Comment by Chairperson**

The Chairperson thanked Mr Ian Trollope and Mr Jan Norman from Eskom, for their assistance with the Melkbosstrand Neighbourhood Watch. Due to their involvement Eskom Koeberg has allowed for a repeater to be put on the weather station to allow radios in Melkbosstrand to better “communicate” with each other. This will greatly assist SAPS to improve radio communication when doing their patrols. As a result the network will be audible up to the N7.

Question by Mr Brown

Mr Brown said that as a long term resident of Duynfontein, he would like to know why the Duynfontein Beach was closed. According to him the response from Eskom thus far had been unsatisfactory. He added that the beach has been open for 30 years and was closed without warning. He requested detailed insight into why it was closed.

Response by Chairperson

The Chairperson responded that this question was answered in a previous meeting but stated that it is good for these questions to resurface as it gives more people insight into the issue.

Comment by Mr Brown

Mr Brown responded that although the question was answered, the response was not detailed enough.

Response by Mr Featherstone

Mr Featherstone indicated that if there is a request, Koeberg should honour it. He added that the closure was advertised in local media and brought to the PSIF before the beach was closed.

Question by Mr Mayhew

Mr Mayhew asked whether a representative from the ambulance services can give a presentation about their role in a nuclear emergency at the next KPSIF meeting.

Response by Mr Phidza

Mr Phidza acknowledged the request and responded that Eskom will engage the CoCT and based on their availability a decision will be made whether to invite them for the March or June 2014 meeting.

EP Calendar 2014 – update

The Chairperson informed the KPSIF members that the Koeberg Emergency Plan Calendars were in print and would be distributed to residents during the month of November 2013. She requested that members read and keep their copy as it contains key information pertaining to the Koeberg Emergency Plan and actions required from them.

11. Date of the next meeting

The next KPSIF meeting is scheduled to take place in the Nuclear Auditorium, Bulk Stores at 19:00 on 27 March 2014.

12. Possible/proposed agenda points for next meeting

- UCT marine life research presentation
- The role of Ambulance Services in the Koeberg Emergency Plan
- Sea Shore Act presentation and its impact
- Koeberg quarterly feedback – focus on nuclear safety, health, environment and plant
- Update on Koeberg's response to the Fukushima incident.
-

13. Closure

The PSIF meeting was adjourned at 20:45.

