



National
Nuclear
Regulator

The Green Connection

Liziwe McDaid



STANDING FOR ENVIRONMENTAL AND SOCIAL JUSTICE

Who Are We?

The Green Connection is a registered **Non Profit Organization** in the republic of South Africa, focused on **environmental and social justice**. Recent efforts are directed protecting our ocean heritage. Our main aim is creating awareness, amplifying voices and creating meaningful partnerships that will effect change towards fair, equitable and sustainable development.



Should Nuclear Energy be part of our future in South Africa?

Liziwe McDaid and Makoma Lekalakala

2018 Goldman Environmental Award winner
for Africa



Current Challenges in making Energy choices – for the public good

- Sustainability – no waste, pollution
- Least damage – health, environmental harm
- Climate change response – low carbon
- Social benefits – local control, ownership, jobs
- Affordable – costs of finance, maintenance, budget impacts
- Democracy – transparency and consultation

Civilian exposures

- May 2013 - A batch of metal-studded belts sold by online retailer [ASOS.com](#) were confiscated and held in a U.S. radioactive storage facility after testing positive for [\$^{60}\text{Co}\$](#) .^[77]
- April 2010 - INES level 4 - A 35-year-old man was hospitalized in [New Delhi](#) after handling radioactive scrap metal. Investigation led to the discovery of an amount of scrap metal containing [\$^{60}\text{Co}\$](#) in the New Delhi industrial district of [Mayapuri](#). The 35-year-old man later died from his injuries, while six others remained hospitalized.^{[71][72]}
- December 2001 – Three woodcutters in the nation of [Georgia](#) found two warm canisters near their camp and spent the night beside them..... The woodcutters started showing symptoms of [radiation sickness](#) within hours, and were subsequently hospitalized with severe radiation burns.^[45] The disposal team consisted of 25 men who were restricted to 40 [seconds](#)' worth of exposure each while transferring the canisters to [lead](#)-lined drums.^[46]

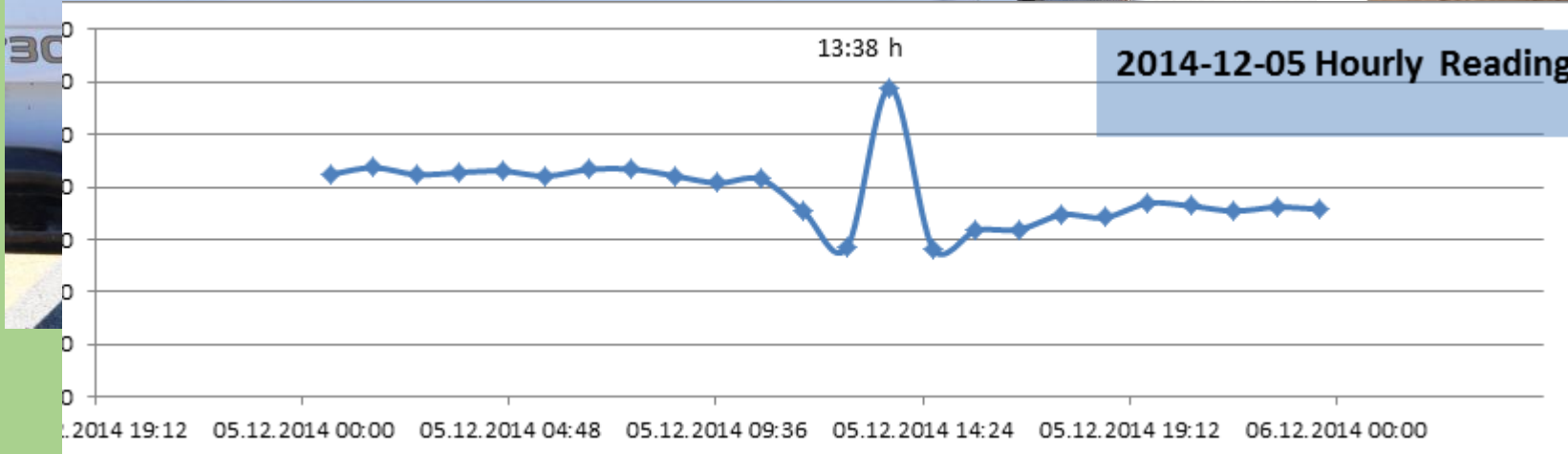
Civilian exposures..

- May 1998 – Recycler Acerinox in Cádiz, Spain, unwittingly melted scrap metal containing radioactive sources; the radioactive cloud drifted all the way to Switzerland before being detected.[22][36] (See Acerinox accident.)
- 1999 – A road near Mrima Hill, [Kenya](#) was rebuilt using local materials later found to be radioactive. Some workers were exposed to excessive radiation, and many residents of the area were tested for exposure. 2,975 metric tons of roadway material were to be dug up to eliminate the hazard.[\[38\]](#)

Is everything under control ?



CROSS-BORDER MOVEMENT



National Nuclear Regulator

- The fundamental objective of the NNR is to provide for the protection of persons, property and the environment against nuclear damage through the establishment of safety standards and regulatory practices suited for South Africa. To this end, the NNR provides oversight and assurance that activities related to the peaceful use of nuclear energy in South Africa are carried out in a safe manner and in accordance with international principles and best practices.

- National Environment Management Act 1998

Key Principles

- Precautionary principle - *that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions;*
- Participation to be promoted - *The participation of all interested and affected parties in environmental governance must be **promoted**, and all people must have the opportunity to develop the understanding, skills and capacity ..*
- Access to information / reasoned decisions- *Decisions must be taken in an open and transparent manner, and access to information must be provided in accordance with the law.*
- Environmental justice *must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.*

Entered into by and between:

ESKOM HOLDINGS LIMITED

(herein represented by Mr P Dukashe in his capacity as General Manager
(Production) Nuclear)

("ESKOM")

and

**THE WESTERN CAPE PROVINCIAL GOVERNMENT IN ITS DEPARTMENT
OF LOCAL GOVERNMENT AND HOUSING**

(herein represented by Ms S Majiet in her capacity as Head: Department of
Local Government and Housing)

("the Province")

and

THE CITY OF CAPE TOWN

(herein represented by Mr A Ebrahim in his capacity as City Manager)

("CoCT")

9. FINANCIAL ARRANGEMENTS

- 9.1** ESKOM is responsible to cover the costs for the establishment, implementation and management of the Plan, insofar as it relates to Koeberg, or any action related to Koeberg, which is capable of causing nuclear damage.

THE INTEGRATED KOEBERG NUCLEAR EMERGENCY PLAN

- Disaster Management – means a continuous and integrated multi-sectoral, multi-disciplinary process of planning and implementation of measures aimed at:
 - (a) preventing or reducing the risk of disasters;
 - (b) mitigating the severity or consequences of disasters;
 - (c) emergency preparedness;
 - (d) a rapid and effective response to disasters;

Can we know that Koeberg is safe to continue?



FINDING-1: The plant has not comprehensively revalidated the TLAAAs [time limited ageing analyses] for concrete structures.

RECOMMENDATION: The plant should consider improving revalidation of TLAAAs for concrete structures.

Emergency exercise latest MOU 2007

2014

- Wind direction
- Transport offsite
- City – “believed National dept had jumped the gun”
- Practising for a few weeks
- Radioactive water spillage

2022

- Many weather people
- Golden Arrow?
- City – no show
- Modern tech – drones but not seen
- Iodate vs iodide
- Comms with public – sms's

If things go wrong, is our emergency plan in place?



How do we decide?

- Do we have sufficient information?
- How do we have our voices heard?
- The NNR process – strengthening regulation?
- Is Eskom providing the money?
- Should we not shut koeberg down until and unless we have proof that it is safe – cant panelbeat while flying

Thank you



LIZ MCDAID

Emails: liziwe@mweb.co.za

Skype: liziwesa

Making sustainable development a reality



IMPORTANT

- VW POLO CA 271 346
- MAZDA 2 CA 31 382
- TOYOTA PRADO CY 225 417