

NUCLEAR NETWORK AFRICA

THE WORLD OF NUCLEAR

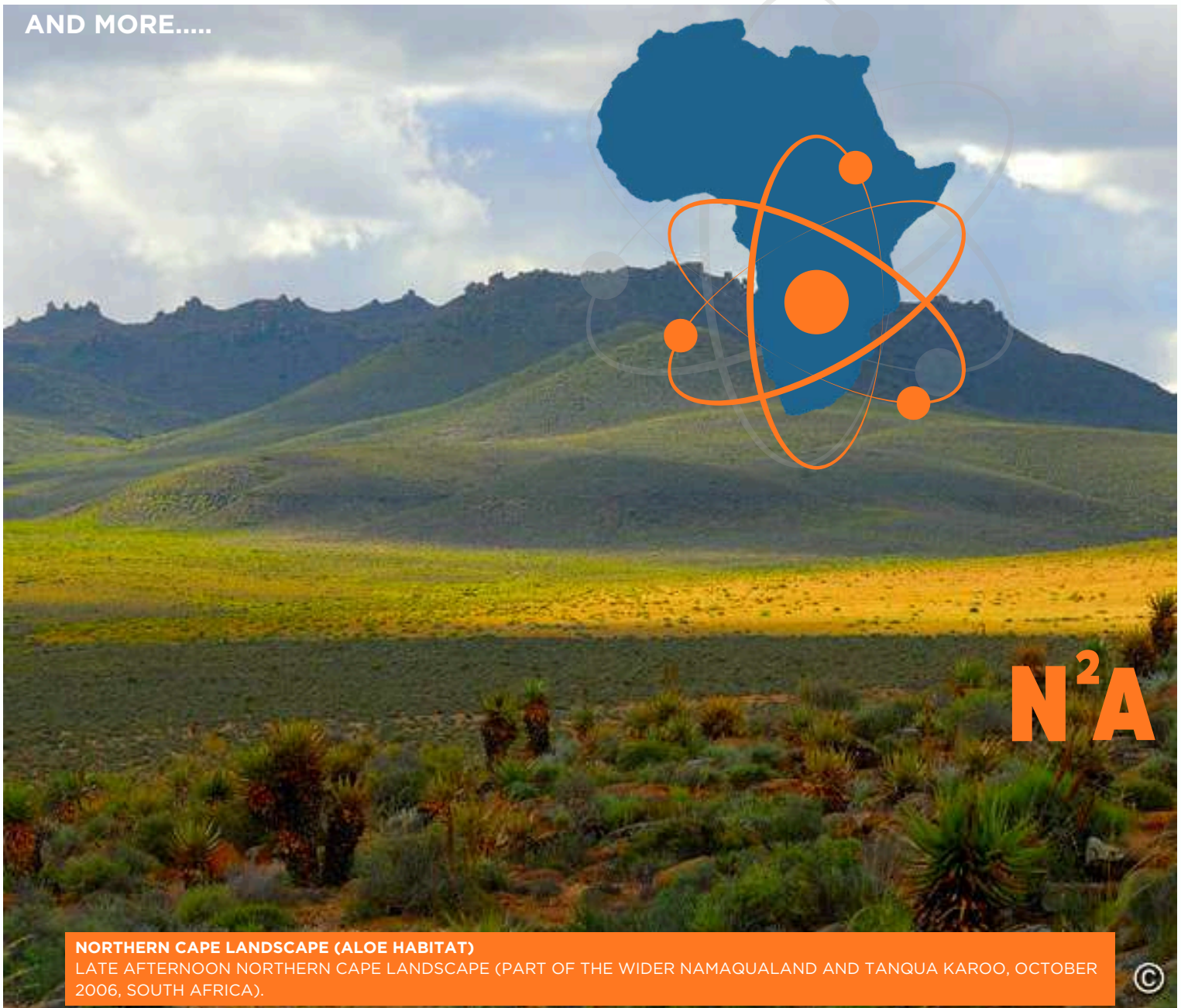
SAMANTHA GRAHAM-MARE: NRWDI AND HOW ARE THEY NAVIGATING MANAGING SOUTH AFRICA'S RADIOACTIVE WASTE

OLIVIA VAUGHAN

KOEBERG AT 40: A PIONEER'S MEMORIES OF SOUTH AFRICA'S FIRST NUCLEAR POWER PLANT (PART 2)

GEERT DE VRIES

AND MORE.....



NORTHERN CAPE LANDSCAPE (ALOE HABITAT)

LATE AFTERNOON NORTHERN CAPE LANDSCAPE (PART OF THE WIDER NAMAQUALAND AND TANQUA KAROO, OCTOBER 2006, SOUTH AFRICA).

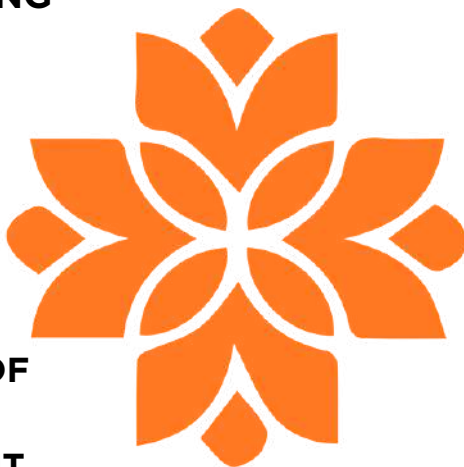


N²A

HIGHLIGHTS

**04 SAMANTHA GRAHAM-MARE:
NRWDI AND HOW THEY ARE
NAVIGATING MANAGING
SOUTH AFRICA'S
RADIOACTIVE WASTE**
OLIVIA VAUGHAN

**11 KOEBERG AT 40: A
PIONEER'S MEMORIES OF
SOUTH AFRICA'S FIRST
NUCLEAR POWER PLANT
(PART 2)**
GEERT DE VRIES



**09 60 YEARS OF SAFARI 1:
A REACTOR THAT
CHANGED THE WORLD,
EVERY 3 MINUTES**
DR KELVIN KEMM

**14 DECOMMISSIONING
AND TOXIC WASTE
PLANNING IS NEEDED -
FOR RENEWABLES**
CHRIS MEYER

FROM THE EDITOR

Nuclear Waste & Safety in Power Production

Welcome to the April edition of N²A (Nuclear Network Africa), where we explore the critical themes of nuclear waste management and safety in nuclear energy production.

These topics sit at the heart of public confidence and long-term sustainability in the nuclear industry, especially as Africa begins to reimagine its energy future with cleaner, more reliable power sources.

This edition takes a closer look at the lifecycle of nuclear materials, what happens after fuel has served its purpose, and how we can manage these materials responsibly. From interim storage to deep geological repositories and advanced recycling technologies, the articles highlight global best practices and how they might be adapted to African contexts.

We also unpack the rigorous safety protocols that govern the design, construction, and operation of nuclear power facilities. Safety is not merely a feature of nuclear power, it is its foundation.

As always, we aim to provide accessible, informed perspectives for industry professionals, policy makers, and the broader public. We invite you to engage, question, and consider the role of nuclear energy in creating a resilient and sustainable energy mix for Africa.

Warm regards,

Heather Veldhuis
HEATHER VELDHUIS
EDITOR



Vaalputs, located in the arid Northern Cape, is ideal for radioactive waste disposal due to its geological stability, low population density, low rainfall, and deep clay-rich soil. These conditions minimize groundwater movement and reduce environmental risk, making it a secure, long-term storage site for low- and intermediate-level radioactive waste.

SAMANTHA GRAHAM-MARE: NRWDI AND HOW THEY ARE NAVIGATING MANAGING SOUTH AFRICA'S RADIOACTIVE WASTE

OLIVIA VAUGHAN

INTERVIEW BY OLIVIA VAUGHAN

The National Radioactive Waste Disposal Institute (NRWDI) in South Africa is a statutory body established under the National Radioactive Waste Disposal Institute Act, 2008. Its mandate is to manage radioactive waste disposal on a national basis, including the operation of the Vaalputs Radioactive Waste Disposal Facility located in the Northern Cape, approximately 100 km southeast of Springbok.

NRWDI places significant emphasis on long-term waste management as the nuclear industry grows, and its mission is to ensure safe transportation and isolation of waste from the environment.

Challenges NRWDI Faces

Safety and Security

One of the primary challenges for NRWDI is ensuring the secure transport and disposal of radioactive materials. This involves stringent safety protocols and advanced security measures to prevent any potential threats during waste transportation, disposal and storage.

Koeberg is 40 years old and needs to move its nuclear waste to an offsite location in the near future. Graham-Mare explained that currently Koeberg is importing specialised steel casks to store additional waste on site. Moving these casks to Vaalputs has been touted as an option and is being explored, but is thwarted by environmental and security concerns with regards to road transport. Constructing these casks in South Africa is also being explored, but this needs significant funding and may not be a viable solution in the short term.



The Hon Samantha Graham-Mare, Deputy Minister of Electricity and Energy, South Africa.

Ms Samantha Graham-Maré was appointed as Deputy Minister of Electricity and Energy in July 2024. She matriculated from the Rhenish Girls' High School in Stellenbosch and then obtained a Bachelor of Laws degree from the University of South Africa.

After pursuing a career in Municipal and Provincial government she became a Member of Parliament in 2019. She previously served as a Councillor Delegate to the Eastern Cape Provincial Council, contributing her insights and experience to provincial governance.

CONTINUED ON PG 05

CONT.... FROM PG 4

The Deputy Minister however emphasized, that the high level waste stored at Koeberg is currently being safely and securely stored according to international safety standards, with no risk to the public or the operators.

It is imperative for NRWDI to have the correct mandates, licenses and support in place, to ensure that all security protocols are adequately fulfilled and NRWDI are committed to working with both government and the public, to implement the most secure and innovative solutions to one of South Africa's oldest and most reliable baseload electricity solutions.

Public Perception

Addressing public concerns about the safety and environmental impacts of radioactive waste storage is another significant challenge. NRWDI actively engages with communities and stakeholders to provide transparent information and alleviate fears associated with radioactive waste management.

Graham-Mare reiterated commitment from the Department to continue with transparent public participation processes together with NRWDI, to further educate the public on the benefits and risks of nuclear energy and associated waste storage and management.

The funding bill for the requisite NRWDI storage facility is currently before Parliament, however Graham-Mare says that the Democratic Alliance is of the opinion that a stand-alone fund will not be required. The DA feels that the Bill should be amended to ringfence funds currently available to allow the construction activities of such a facility to commence. Graham-Mare says that the department remains open to interested parties who have innovative solutions, and welcomes active and constructive participation.

Regulatory Compliance

Navigating the intricate landscape of international and local legislation on nuclear waste management requires NRWDI to remain compliant with a myriad of regulations. The institute works diligently to adhere to these standards and implement best practices in waste management.



The specific license for Vaalputs is known as Nuclear Installation License NIL-28. This license outlines the conditions under which the facility can operate, including safety requirements, radiological monitoring, and compliance with the Vaalputs Waste Acceptance Criteria. These criteria, approved by the NNR, ensure that only waste meeting strict safety and packaging standards is accepted for disposal. The license mandates adherence to international standards, such as those set by the International Atomic Energy Agency (IAEA) and incorporates principles like "As Low as Reasonably Achievable" (ALARA) and defense-in-depth through a multi-barrier system (natural and engineered barriers).



LLW metal containers being emplaced in a disposal trench - Vaalputs National Radioactive Waste Disposal Facility Public Information Document (PID)

CONTINUED ON PG 06

CONT.... FROM PG 5

IMAGES FOUND IN - VAALPUTS NATIONAL RADIOACTIVE WASTE DISPOSAL FACILITY PUBLIC INFORMATION DOCUMENT (PID)



Arrival of Waste at Vaalputs



Receiving Inspection



Disposal into trench



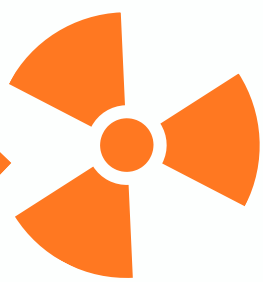
Backfilling of waste packages



Capping of Disposal Trench



Rehabilitated Trench



CONT.... FROM PG 6

One of the challenges in the South African regulatory climate, according to Graham-Mare, is that NRWDI does not hold the license for the waste repository, South African Nuclear Energy Corporation (NECSA) does. This is in the process of being renewed so that NRWDI becomes the licensed operator of the facility to enable it to fulfill its nuclear waste management mandate effectively.

It does not permit high-level waste (HLW) or spent nuclear fuel disposal, which remains stored at their points of origin (e.g., Koeberg and Pelindaba). Future expansions, such as a Centralised Interim Storage Facility (CISF) for spent fuel, will require additional licensing. As of writing, the license, NIL-28 remains specific to LLW & ILW disposal operations at Vaalputs.

Futureproofing

Ensuring the long-term containment of radioactive materials without affecting future generations is a critical focus for NRWDI. This involves ongoing research and innovation to develop sustainable waste management solutions that look far ahead into the future and can withstand the test of time. By tackling these challenges head-on, NRWDI continues to uphold its commitment to safe and effective radioactive waste management in South Africa, safeguarding both the environment and future generations.

Graham-Mare says that this Centralised Interim Storage Facility must include plans for a deep geological waste repository later on. Many countries across the world are focusing on high level nuclear waste storage, which will provide indexed storage warehouses. From these storage facilities, high level nuclear spent fuel will be retrieved and recycled, making nuclear energy the only true technology on the planet with a long term solution, down to the last molecule.

A new Board a New Dawn for NRWDI?

According to Graham-Mare, a new CEO, Riedwaan Bakardien, has been appointed to the board and started on the 1 April 2025. She is optimistic about the new appointment, as the full mandate of her own office, the Ministry of Electricity, also came into effect on the 1 April 2025.



Olivia Vaughan holds a Bachelor of Commerce in Law and an MBA. She operates across key sectors in the circular economy, with focus on sustainable systems and the built environment. She lives in the Eastern Cape of South Africa.

“Chairperson, Ms. Dorah Modise and the board of NRWDI have been absolutely stunning! They had been without a CEO since February of 2024, and they [the board] have welcomed the appointment of Bakardien as a significant milestone on their path to success”.

Graham Mare reenforced the department’s commitment to support NRWDI through innovation, compliance, and transparency at a national level. Although there are significant financial constraints, she believes that these can be overcome, as South Africa readies itself for nuclear energy expansion.



CONTINUED ON PG 08

CONT.... FROM PG 7

NRWDI, Embracing a Nuclear Energy Future

Radioactive waste repositories worldwide, such as France’s Cigéo, Sweden’s Forsmark (under construction), and Finland’s Onkalo (nearing operation), reflect a global shift toward deep geological disposal for high-level waste, prioritizing long-term safety and isolation.

Low- and intermediate-level waste facilities, like South Africa’s Vaalputs, are more established, using near-surface methods. Challenges include public acceptance, cost, and site selection, but advancing technology and international cooperation, seen in IAEA frameworks, suggest a future of safer, standardized solutions.

In South Africa, NRWDI is poised to take over Vaalputs from Necsca and expand its role, with plans for a Centralised Interim Storage Facility (CISF) for spent fuel and later, deep geological repositories. NRWDI’s future hinges on funding, regulatory clarity, and public trust. By 2030-2040, it could align South Africa with global leaders, provided it overcomes delays and resource constraints. Graham Mare is excited about what the future holds and calls to the public to support institutions and researchers that are embracing the future of nuclear energy in South Africa and beyond.



High Tech CAMERA Solutions
 Buzz Group Camera Solutions
 Securing Today, Innovating Tomorrow

- Advanced Technology
- Mobile App Monitoring
- Control Room Functionality
- Expert Installation

www.buzzgroup.co.za
CONTACT US: +27 (82) 800 1725
 info@buzzgroup.co.za

STRATEK GLOBAL
 ADVANCED ENERGY SOLUTIONS

KUDU DESIGN HTMR-100
 100MW - Thermal
 35MW - Electrical

Pretoria, South Africa
 www.stratekglobal.com
 admin@stratekglobal.com

This variant of the **HTMR-100** is designed for the general **African Savannah, or European conditions**. It features a single reactor. Reactors are **Helium gas cooled** and are independent of any large body of water. TRISO Fuel is used - graphite/uranium **pebble type fuel**.

60 YEARS OF SAFARI 1: A REACTOR THAT CHANGED THE WORLD, EVERY 3 MINUTES

At 6-33 pm on 18 March 1965, the Safari 1 nuclear reactor near Pretoria started operating. In nuclear jargon, it 'went critical.' That means that for the first time the nuclear chain reaction became self-sustaining.

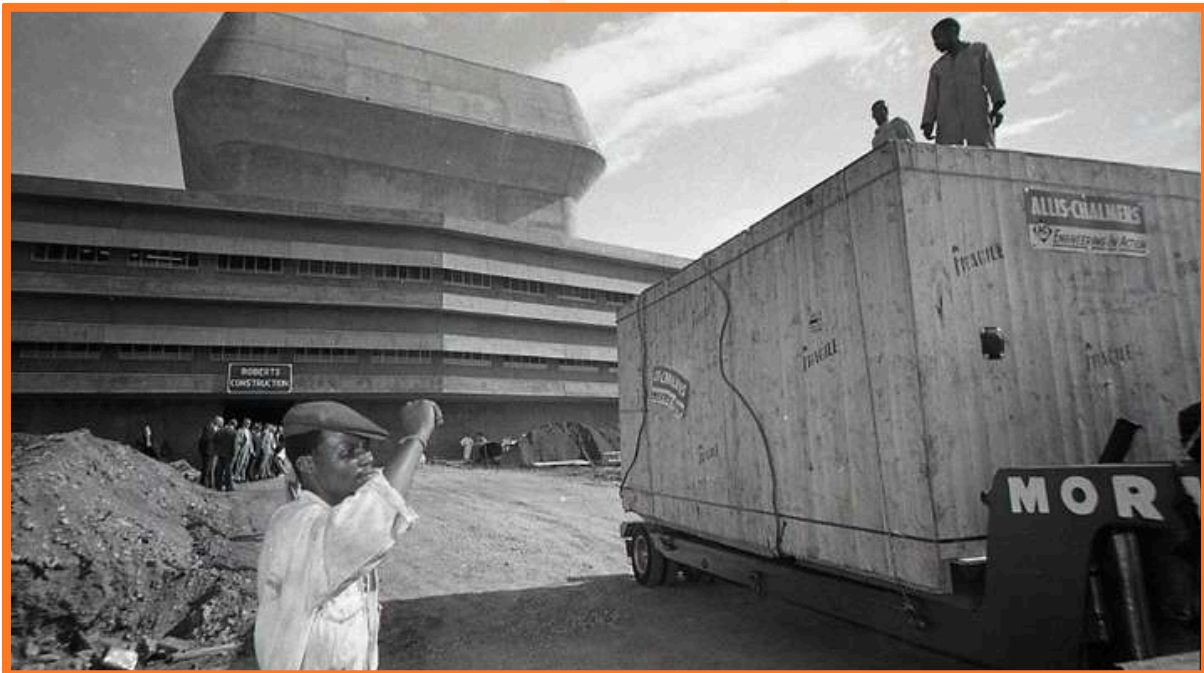
It was an historic moment, and that is why we know the time to the minute. In 2025 the 60th Anniversary of the reactor dawned, a major achievement.

Safari 1 went on to become one of the major producers of nuclear medicine in the world, a position which it still holds. Every three minutes somebody, somewhere in the world, is injected with nuclear medicine from Safari 1, and every three hours somebody's life is saved.

This reactor also produces the world's best quality silicon for silicon chip fabrication. So, processed pieces of this silicon could well be in your cell phone, computer, or TV.

The reactor staff, over the past six decades, can be proud of their collective achievement. The reactor is still good for years to come.

Dr Kelvin Kemm



SAFARI 1 reactor component arrives outside-SAFARI1 building

IS NUCLEAR WASTE MANAGED WITH LONG-TERM RESPONSIBILITY?



The handling, storage, and disposal of nuclear waste materials are governed by some of the most stringent safety protocols in the global energy sector. These measures are enforced by national regulatory bodies and aligned with international frameworks such as those developed by the International Atomic Energy Agency (IAEA), ensuring comprehensive protection of people and the environment.

When nuclear fuel has completed its energy-generating cycle in a reactor, typically after about three to five years, it becomes highly radioactive spent fuel. This fuel is carefully removed and placed in deep, water-filled cooling pools on-site at the reactor. These pools provide both cooling and radiation shielding, allowing the spent fuel to safely stabilise over several years.

Once sufficiently cooled, the spent fuel is transferred to dry cask storage. These casks are massive, air-cooled containers constructed from steel and concrete, engineered to resist extreme conditions including earthquakes, floods, fire, and impact. They are monitored continuously and provide secure interim storage for decades.

For long-term solutions, countries are investing in deep geological repositories. These are purpose-built underground facilities located many metres beneath stable rock formations, designed to contain high-level waste for thousands, even millions, of years. Finland's Onkalo repository, set to be the world's first operational facility of this kind, represents a milestone in responsible waste disposal.

In parallel, advanced fuel recycling technologies are being developed and deployed. Processes such as reprocessing and partitioning/transmutation allow for the recovery of usable uranium and plutonium from spent fuel. These materials can be reused in reactors, significantly reducing the volume and radiotoxicity of the final waste product. France and Russia have active recycling programs, and several other countries are investing in this technology.

From the moment fuel leaves the reactor to its final disposal, each step is managed through tightly regulated procedures, rigorous engineering, and scientific innovation. Nuclear waste may remain hazardous for a long time, but it is not unmanaged. It is a known and well-controlled challenge, addressed through a commitment to safety, responsibility, and long-term stewardship.



ARINT
South Africa

ARINT INTERNATIONAL
22 YEARS

Engineering, Risk and SHEQ Services

Main Projects:

- France - Nuclear Waste Repository
- Rwanda - Lake Kivu Biogas Power Station - 56MWe
- South Africa and Australia - New Nuclear Pebble Bed Power



KOEBERG AT 40: A PIONEER'S MEMORIES OF SOUTH AFRICA'S FIRST NUCLEAR POWER PLANT (PART 2)

GEERT DE VRIES

Geert de Vries has an MSc in physics and an MBL. He fluently speaks English, Afrikaans, Dutch, German, and French.

During the early part of his career, he worked at Iscor and the CSIR. He then worked at the Max Planck institute in Germany, and later at the Centre d'Etudes Nucleaires (CEA) in France. Subsequently he spent six months as a visiting scientist at the Reactor Centrum Netherland, at Petten in Holland

Later he worked for the French company Framateg, on the building of Koeberg Nuclear Power Station, and subsequently found himself at Eskom working on the PBMR project.



SEE PART 1 IN EDITION 8 - CONTINUED ...On that trip Bonin carried in the aeroplane, a metre-long, 6"-wide plank, wrapped in paper. On the way to site, about a kilometre past the Melkbosstrand village signpost, he stopped where Otto du Plessis Drive turns off the M14, and unwrapped the plank, which had Koeberg and a hand-painted arrow on it. Out of his suitcase he fished a hammer and nails and hammered our road sign onto the wooden telephone pole at the corner, nicely visible when coming up the M14. From then on, we could tell colleagues from Paris how to reach the site, 'just turn at the sign.' That sign stood there for the whole duration of Koeberg's construction.

At the time Melkbosstrand was not much of a village, it was mainly an empty area, with a small corner shop near the village signpost. There was a smattering of houses and a caravan park along Otto du Plessis Drive. This changed quickly once Koeberg construction started. Estate agents and others went into business, and completely changed the countryside into the densely built-up suburb it is today.

In Paris the FEG office occupied about half a floor in Tour Fiat, a 50-storey office tower at La Defense, the commercial suburb west of Paris.

In late 1976 or early 1977, after basic site establishment was done, SB had started actual civil work. The first large job was to carry out the excavation for the foundation of the Nuclear Island (NI). The requirement was to dig down to bedrock, and then to fill back up with soil-cement. The concrete foundation for the NI would be set on top of the soil-cement. The excavation process took many months. By the time I started flying south it was still going on.

The unusual thing that I wanted to see was the bare bedrock surface. The process consisted of removing all soil, mostly beach sand, where the Nuclear Island's foundation and structures would come, down to bedrock at about 12m below mean sea level (MSL). Since the ground-level was about 8m above MSL, this meant excavating 20 metres deep, over an area of about 200 x 100 metres. The rectangular hole's sides were then lined with a waterproof bentonite wall, to slow down groundwater running back in. The excavation could then be kept more-or-less dry, with some hundred water pumps running 24-7.

CONTINUED ON PG 12

CONT.... FROM PG 11

So, during an early 1977 site visit, I took time off to descend, down one of the ladders, to see the uncovered bedrock. It was a rocky surface, roughly horizontal, but with metre-size rocks above the average level, and deep clefts below.

The surface was not unusual, but what was unusual was that it was laid bare for the first time in some millions of years. I clambered around on the bedrock. A meticulous pressure-cleaning activity was underway. That rough rocky surface needed to be cleaned before the soil-cement foundation could be cast. It was done by removing all loose rock, and then cleaning with pressurised water to remove organic matter and the sand and grit from the clefts, It was then hoisted out of the excavation. This was a lot of machine-supported manual labour.

Part of the 400 000 m³ of soil removed was reused to make the soil-cement that would form the lower part of the foundation. Soil-cement is soil and 5% cement. So the removed soil was first passed through mechanical sieves to remove rock and organic matter, to become clean beach-sand. This sand with 5% cement, and just enough water, was then mixed, in cement mixers. This thick slurry was poured onto the cleaned bedrock, at 12 m below MSL.

It was tamped down in the clefts, ultimately filling the whole excavation inside the bentonite wall, up to 6 m below MSL. So, the soil-cement layer is about 6 m thick, comprising a volume of about 120 000 m³. After setting, the soil-cement presented a 'hard sand' surface. Care was taken to ensure that the surface at 6 m below MSL was precisely horizontal, using the services of the contractor's surveying company. The concrete foundations of the Nuclear Island could then be cast on that flat surface.

Someone said they had found shark's teeth when sieving the removed soil, indicating that at some time in the past, either the sea-level was a few metres higher than today, or the land had risen, or the sea had deposited soil on the coastline, or something.

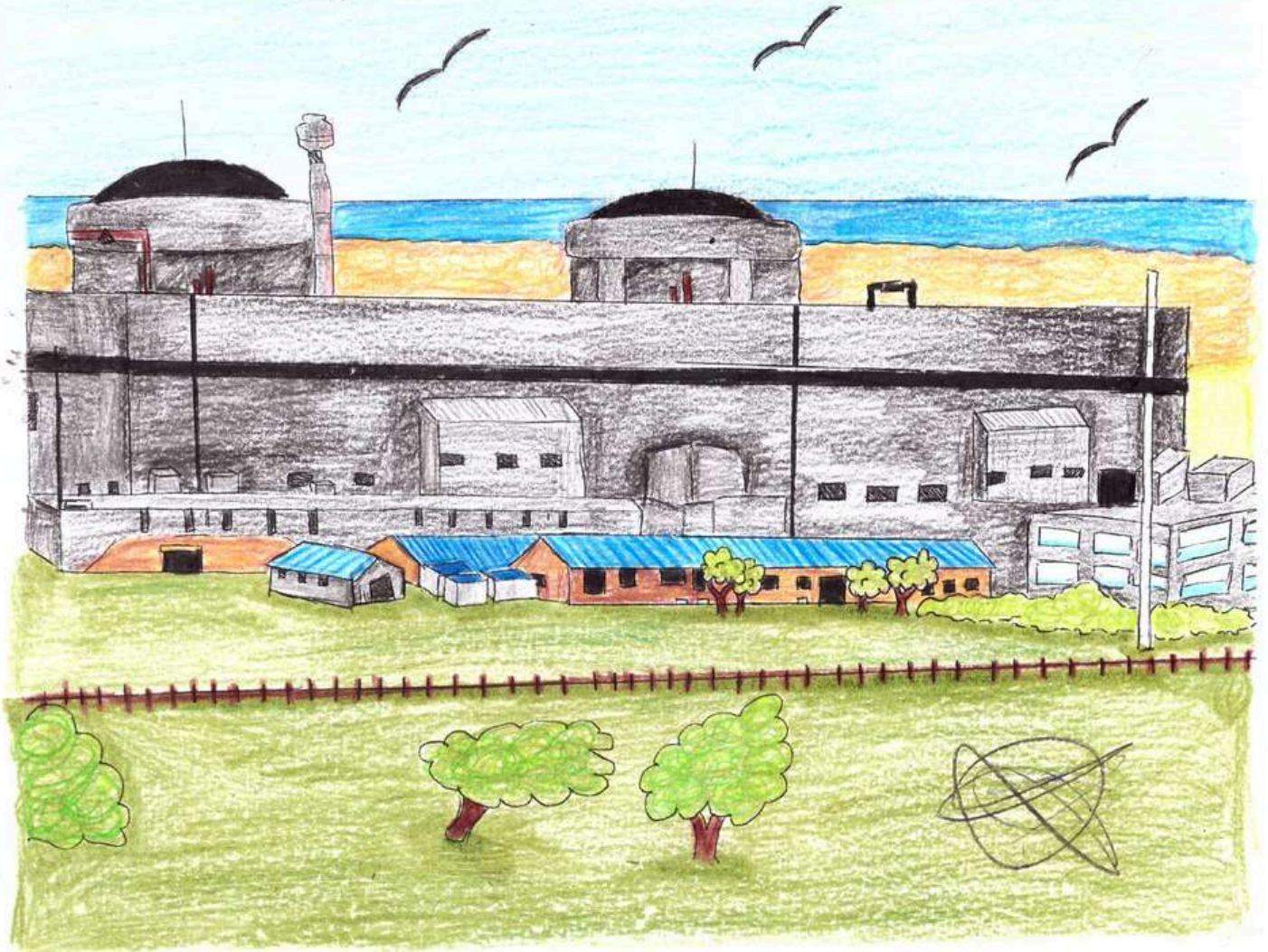
Before I left site that day, the person who mentioned the shark-tooth story gave me a 3 cm large, blackened, tooth, that presumably had been buried for millions of years.

I still treasure it.





Koeberg Nuclear Power Station



Chalotte Van Onselen is the newest addition to the N²A creator team, bringing her unique artistic vision to the Digital Magazine at just 13 years old.

With a deep passion for art and a heart set on making a difference, Chalotte is already leaving her mark on the nuclear world.

Her first piece for N²A is a striking depiction of the Koeberg Nuclear Power Station, blending realism with imagination. Chalotte captures the station not just as a structure, but as a symbol of clean energy and hope. She artfully contrasts the industrial silhouette of Koeberg with the soft blues and greens of the surrounding environment, reflecting the harmony between technology and nature.

Her creativity, courage, and commitment to impact sets her apart from many her age. N²A is proud and fortunate to have such a talented young trailblazer on board.

DECOMMISSIONING AND TOXIC WASTE PLANNING IS NEEDED – FOR RENEWABLES

CHRIS MEYER

Nuclear Waste

One of the major arguments used against nuclear power is the issue of nuclear waste. More specifically, what is going to happen to the nuclear wastes produced. And, of course, what is going to happen to a nuclear power plant at the end of its working life: decommissioning the plant and budgeting for the costs involved. High-level nuclear waste can actually be more valuable than gold if reused.

With any nuclear reactor, long before building starts, detailed planning has already been completed on both decommissioning and how to handle all nuclear wastes. This applies equally to large Pressurised Water Reactors, and SMR reactors, such as the HTMR-100.

But what about renewable energy? Comparatively few people realise that renewable energy also needs planning for decommissioning and hazardous wastes, and the costs involved. For this it is not cheap: one estimate places the complete decommissioning of a single wind turbine in Australia at between 400 000 to 600 000 Australian dollars. Furthermore, some types of solar panels may need to be treated as hazardous waste, which requires expensive processing.

End-of-use Solar Panels

In the USA, the Environmental Protection Agency has only recently (2023) begun grappling with how to deal with end-of-use solar panels, although they have been aware of the growing problem for quite some time. There are basically two types of solar panels, silicon solar and thin-film solar.

While some parts of solar panels such as their aluminium frames, copper wire, plastic junction boxes and glass coverings can be recycled and re-used, the actual silicon cells pose more of a problem. Depending on the amounts of toxic heavy metals, like lead, cadmium, and tellurium, they contain, the panels may need to be classified as hazardous waste.

Extracting these metals for recycling and reuse is far from simple.

Put another way, end-of-use solar panels cannot, like other waste, simply be dumped in a landfill. Special sorting and recycling processes are required, and some material will need to be treated as hazardous waste.

This means the disposal of end-of-use solar panels will require extra costs. While the process and the treatment may be simpler than treating nuclear waste, the volumes involved will be larger. By 2030, the USA is expected to be generating close to half a million tonnes of waste solar panels. This will be something like 0,5% of the total solid waste produced in the USA.

Wind Turbines

Drive anywhere in a South African city and you can hardly fail to notice one thing: the large numbers of photovoltaic systems being placed on roofs just about everywhere. Wind turbine farms are less common. To see wind turbines, you will probably need to visit the narrow band near the coast where enough wind blows to make wind worthwhile.

Wind turbine farms are far more common in Europe, the USA, and Australia than in South Africa. They have also been operating for longer, long enough for some wind turbines to be reaching their end-of-life and requiring disposal.

In Texas and Australia, people are starting to realise that disposing of wind turbines is going to pose issues that were not considered when they were built. Some people are starting to question just how 'renewable' wind turbines really are.

CONTINUED ON PG 15

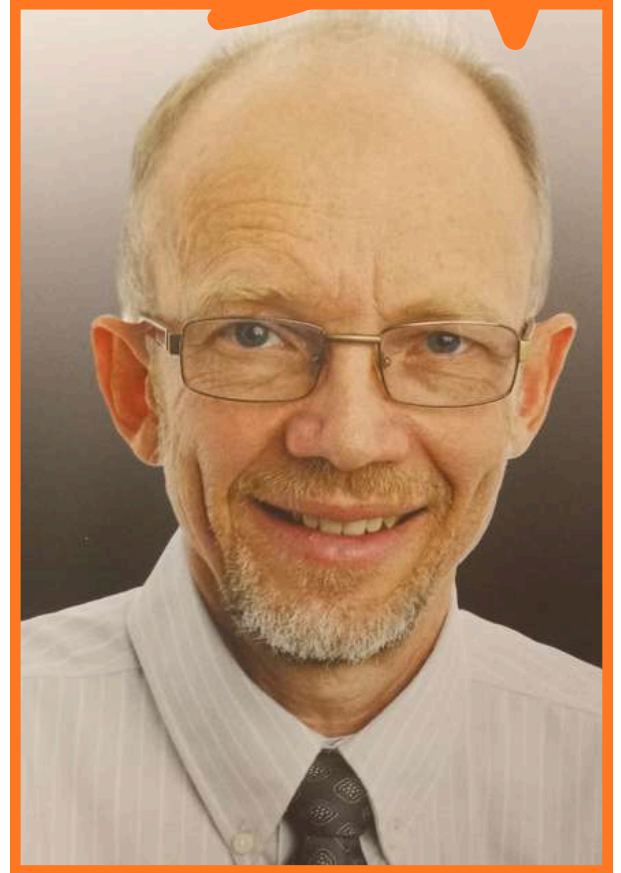
CONT.... FROM PG 14

Only a limited number of turbine blades can be repurposed in creative ways such as; bus stops, playgrounds, bicycle shelters and the like. And the problem is going to get worse, as the newer wind turbines are huge, and have blades the length of a football field (107 metres), while most older turbine blades are only about half this size. That is a lot of very tough fibreglass and resin composite to dispose of. Wind turbine blades are designed specifically to not break down easily.

Only recently are designers trying to develop blades with disposal in mind, or even with recycling options.

South Africa

Renewable energy is still a comparatively new thing in South Africa. Most of the photoelectric systems and wind turbines are still within their working lives, of around twenty years. What will happen to all the PV panels after their working lives is a problem few have considered. In mining, the actions and costs needed to rehabilitate a mine are planned and budgeted for before actual mining starts. Like mining, we need to have plans and processes, and estimated costs, ready long before the problem arises.



Chris Meyer has a BSc (Hons) in Chemistry, from the University of Stellenbosch. After graduating, he taught science in a high school for three years, and found that he really enjoyed explaining Science in layman's language. He then went on to the Council for Scientific and Industrial Research (CSIR) as an information officer. Some time later he moved to the South African Bureau of Standards (SABS) as a technical publicity specialist, and then technical reviewer. He became interested in the history of nuclear and renewable energy while writing a book "Is Chernobyl dead? Essays on energy: renewable and nuclear", published in 2011.

P.T.F.E. - TEFLON TECHNOLOGY RUI JORGE (PTY) LTD.

Suppliers and Machinists of all Industrial and Chemical Plastics

BILLETS • TUBES • SHEETS • CYLINDERS • TAPES • RODS

"O" RINGS • OIL FREE COMPRESSOR COMPONENTS • SEALS

PISTON & WEAR RINGS • CHECK VALVES • ENVELOPE GASKETS

SCRAPER RINGS • VALVE SEATS • PLUG VALVE SEATS

TEL: 011 440 4849

- 082 338 1139

admin@ruijorge.co.za

www.ruijorge.co.za



Accounting and Bookkeeping Services
designed for Businesses not requiring
a full time Accountant

Contact Brent Slade on: 031 5648270 |
072 112 8148 | brents@mweb.co.za

OmniBusiness
"Taking your Business into Account" Services

- Accounting Services • Payroll Services
- Company Registrations
- Tax Planning • Formation of Trusts • Business Plans • Cash Flow Projections

FOOD FOR THOUGHT



Did you know?? Nuclear techniques play a significant role in ensuring food safety, improving crop production, and adapting to climate change in agriculture. These techniques, such as food irradiation and plant breeding, can help prevent foodborne illnesses, increase crop yields, and develop more resilient plant varieties.

“All men dream: but not equally. Those who dream by night in the dusty recesses of their minds wake in the day to find that it was vanity: but the dreamers of the day are dangerous men, for they may act their dream with open eyes to make it possible.”

***Colonel T.E. Lawrence
1888-1935***

***(The legendary
'Lawrence of Arabia')***



After the outbreak of war in 1914, Colonel Lawrence joined the British Army and was stationed at the Arab Bureau, a military intelligence unit in Egypt. In 1916, he travelled to Mesopotamia and Arabia on intelligence missions and became involved with the Arab revolt against Ottoman rule. Col Lawrence was ultimately assigned to the British Military Mission in the Hejaz as a liaison to Emir Faisal, a leader of the revolt. He participated in engagements with the Ottoman military culminating in the capture of Damascus in October 1918.

NUCLEAR MOMENTUM GROWS: DR SAMA BILBAO Y LEÓN WELCOMES 6 NEW NATIONS TO CLIMATE COMMITMENT

Dr Sama Bilbao y León, Director General of the World Nuclear Association, made these comments at the COP29 UN Climate Change Conference in Baku, Azerbaijan when six additional countries pledged to triple their nuclear power by 2050. The announcement brought the total number of countries endorsing the declaration to 31.

"We warmly welcome these six new countries to the Coalition of the Ambitious. Today's announcement highlights the essential role of nuclear energy in meeting the Paris Agreement goals in a cost-effective and equitable manner.

Leadership requires a clear-eyed assessment of the here and now, but also the foresight to prepare for what the world will need not only in 2050, but in the decades after.

The signatories to this declaration are making a long-term commitment. But it is a long-term commitment with a long term pay off, providing energy certainty and reliability in an uncertain world."

The WNA DG continued:

"Nuclear can now count on the world's biggest banks to back the growth of the nuclear industry. Nuclear has attracted the interest and investment of the world's largest and most advanced technology companies. And nuclear has ever-increasing support from the public, who recognize that in nuclear they have an answer to their demands for energy security, reliable supply and prices, and a response to climate change. This is truly a global coalition of the ambitious. And thank you all for being part of it."



***Dr Sama Bilbao y León,
Director General of the
World Nuclear Association,
with nuclear influencer
Princy Mtombeni of South
Africa.***



APPOINTMENT OF CHAIRMAN DR KELVIN KEMM TO THE SOUTH AFRICAN COUNCIL FOR THE NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION

Stratek Global, a leader in advanced nuclear power solutions, is pleased to announce that its Chairman, Dr Kelvin Kemm has been appointed to the South African Council for the Non-Proliferation of Weapons of Mass Destruction.

The council is tasked with overseeing South Africa's commitments to international non-proliferation regimes, ensuring the country adheres to its obligations under treaties such as the Nuclear NonProliferation Treaty (NPT) and other agreements aimed at preventing the spread of weapons of mass destruction.

The appointment reflects the government's intent to strengthen its institutional framework for nonproliferation, aligning with national security priorities and global disarmament efforts.

The establishment of this council under Ms. Ditebogo Kgomo's leadership signals a proactive step by the South African government to enhance oversight and coordination in this critical area. This move is particularly relevant given South Africa's historical role as a leader in disarmament, having voluntarily dismantled its nuclear weapons program between 1989 and 1991, and its ongoing commitment to promoting peace and security on the African continent and globally.

During the Cabinet meeting held on 26 March 2025, the South African government announced the appointment of members to the South African Council for the Non-Proliferation of Weapons of Mass Destruction.

All appointments are subject to the verification of qualifications and relevant security clearances

Read more >>>> <https://stratekglobal.com/wp-content/uploads/2025/04/Dr-Kelvin-Kemm-appointed-to-the-South-African-Council-for-Non-Proliferation.pdf>
or visit www.stratekglobal.com



Dr Kelvin Kemm is a Business Strategy Consultant based in Pretoria, South Africa. He is a nuclear physicist, past Chairman of the South African Nuclear Energy Corporation (Necsa) and has been involved in the development of the South African SMR program since its inception over two decades ago. He has been a Plenary Guest Speaker at the World Nuclear Association in London, and at the World Nuclear Exhibition in Paris. He Chaired the opening ceremony of ATOMEXPO in Moscow and was a guest speaker at the African Union Economic Summit in Mauritius. He has been a Guest Speaker in places as diverse as Hanoi, Washington DC and Stockholm. He has given both Senate and Congressional briefings in Washington DC.



NUCLEAR NETWORK AFRICA

THE WORLD OF NUCLEAR

Any person who has influence and a role to play in representing any Nuclear-Related Developments to advance nuclear power in Africa. or in any international entity, which can contribute to the development of Africa's nuclear energy capability is encouraged to be part of this great journey.

Any company, ranging in capability from a nut and bolt to the most sophisticated piece of equipment, should join the journey now.

Tailor-made advertising solutions

Maximise your exposure, and build your reputation.

Rachel Gitari

Sales and Marketing

Email: boselemedia@outlook.com

Cell: +27 (0)72 651 9541



Rachel has been involved with Stratek Global and our nuclear projects for over 10 years. She handles sales and marketing functions related to conferences, meetings, brochures and publications like **N²A**

N²A is published by
Stratek Global (Pty) Ltd.

www.stratekglobal.com

Editor: Heather Veldhuis

Email: heather@stratekglobal.com

Cell: +27 (0)83 625 0316

Submit your article or topic for
consideration in our next **N²A** edition.

heather@stratekglobal.com

