FOR THE PROTECTION OF
PERSONS, PROPERTY AND THE
ENVIRONMENT AGAINST NUCLEAR DAMAGE

ANNUAL REPORT 2017/18

This 2017/18 Annual Report of the National Nuclear Regulator (NNR) is presented to the Minister of Energy in accordance with section 7(1)(j) and section 15(6)(d) of the National Nuclear Regulator Act (Act No. 47 of 1999).

The report reflects the activities of the NNR in relation to the health and safety of workers, the public and the environment associated with all sites regulated by the NNR, together with financial aspects in accordance with section 55(1)(d) of the Public Finance Management Act (Act No. 1 of 1999) and Chapter 28 of the Treasury Regulations.

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NATIONAL NUCLEAR REGULATOR

1 GENERAL INFORMATION

VISION

To be an independent leading nuclear regulator.

MISSION

To provide and maintain an effective and efficient national regulatory framework for the protection of persons, property and the environment against nuclear radiation.

CORPORATE VALUES

In carrying out its mission, the NNR adheres to the Corporate Values of:

Professionalism
We demonstrate professionalism by being objective, principled, ethical, and by respecting different opinions.

Integrity
We aim to be non-biased, fair, objective, consistent, honest, reliable and principled in our attitudes and attributes.

Value our people
We show impartiality and recognition by appreciating and valuing input and showing empathy to employees.

Excellence
We deliver work of outstanding quality, efficiently, effectively, innovatively and in a focused manner.

Teamwork
We strive to be a cohesive team that works in collaboration to realise common goals in order to deliver exceptional results.

Openness and transparency
Sharing relevant information with internal and external stakeholders and creating a platform for receiving feedback.

GENERAL INFORMATION

STRATEGIC GOALS AND PRIORITIES

The following strategic goals and priorities were adopted for 2017 – 2018:

- To provide efficient and effective nuclear regulatory services
- To improve awareness of the NNR and strengthen stakeholder relations
- To ensure the financial viability and sustainability of the organisation
- To develop and maintain sound organisational infrastructure
- To create a high performance culture
- To ensure effective human capital management
- To enhance good governance

LEGISLATIVE AND OTHER MANDATES

The NNR was established in terms of section 3 of the National Nuclear Regulator Act, (Act No. 47 of 1999) (the Act) to:

- Provide for the protection of persons, property and the environment against nuclear damage through the establishment of Safety Standards and Regulatory Practices (SSRP)
- Exercise regulatory control related to safety over:
  - the siting, design, construction, operation, manufacture of component parts and the decontamination, decommissioning and closure of nuclear installations; and
  - vessels propelled by nuclear power or having radioactive material on board which are capable of causing nuclear damage (this, through the granting of nuclear authorisations)
- Exercise regulatory control over other actions to which the Act applies, through the granting of nuclear authorisations
- Provide assurance of compliance with the conditions of nuclear authorisations through the implementation of a system of compliance inspections
- Fulfil national obligations in respect of international legal instruments concerning nuclear safety
- Ensure that provisions for nuclear emergency planning are in place

The NNR is listed as a national public entity in Schedule 3 Part A of the Public Finance Management Act, (Act No. 1 of 1999) (PFMA). The Board is the accounting authority in terms of the PFMA. In terms of section 8 (1) and (2), the NNR is governed and controlled by the Board in accordance with the Act to ensure that the objects of the Act are carried out, and to exercise general control over the performance of the NNR's functions.

Legislative framework

- The NNR operates within the following constitutional, legislative and policy frameworks:
- Constitution of the Republic of South Africa of 1996 (Act No. 108 of 1996)
- Nuclear Energy Act (Act No. 46 of 1999) (NEA)
- National Nuclear Regulator Act (Act No. 47 of 1999)
- Public Finance Management Act (Act No. 1 of 1999) (PFMA)
- National Treasury Regulations
- National Environmental Management Act (Act No. 107 of 1998) (NEMA)
- Promotion of Administrative Justice Act (Act No. 3 of 2000) (PAJA)
- Promotion of Access to Information Act (Act No. 2 of 2000) (PAIA)

Policy framework

The NNR is mandated to provide for the protection of persons, property and the environment against nuclear damage in South Africa. This mandate is conferred in a number of policy documents as reflected below:

Nuclear Energy Policy

The Nuclear Energy Policy of the Republic of South Africa was published in June 2008. It presents a framework within which prospecting, mining, milling and the use of nuclear materials, as well as the development and utilisation of nuclear energy for peaceful purposes by South Africa, shall take place.

The Policy covers:

- The prospecting and mining of uranium ore and any other ores containing nuclear properties and materials
- The nuclear fuel cycle in its entirety, focusing on all applications of nuclear technology for energy generation. One of the 16 principles of this policy is that nuclear energy shall be used as part of South Africa's diversification of primary energy sources to ensure security of energy supply

Radioactive Waste Management Policy and Strategy for South Africa.

In carrying out its regulatory mandate, the NNR ensures that policy guidelines and principles relating to radioactive waste management are supported for purposes of ensuring safety. The requirements related to the management of radioactive waste are assessed, and compliance of NNR authorisation holders is monitored.

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) MEMBER STATE

South Africa has been a member state of the International Atomic Energy Agency (IAEA) since 1957, and has entered into the following multilateral agreements:

- Agreement on the Privileges and Immunities of the IAEA
- Convention on the Physical Protection of Nuclear Material
- Convention on Early Notification of a Nuclear Accident
- Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency
- Convention on Nuclear Safety
- Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management
- Revised Supplementary Agreement concerning the Provision of Technical Assistance by the IAEA
- African Regional Co-operative Agreement for Research, Development and Training related to Nuclear Science and Technology (AFRA) – Fourth Extension

LEGALLY BINDING NUCLEAR SAFETY CONVENTIONS

The IAEA facilitates the establishment of international conventions on nuclear safety. These are legally binding international instruments that are required to be ratified by the contracting party or member state before they can be implemented. The conventions place certain obligations on member states to implement measures aimed at ensuring nuclear safety. South Africa ratified the Convention on Nuclear Safety (CNS) in 1996, and its obligations commenced on 24 March 1997.

GENERAL INFORMATION

In November 2006, South Africa acceded to the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The country's obligations under the Joint Convention commenced in February 2007.

As a member state of the IAEA, South Africa is required to fulfil its international obligations and promote international cooperation to enhance global nuclear safety. In terms of section 5(e) of the Act, the NNR is mandated to fulfil national obligations with respect to international instruments concerning nuclear safety, and to act as the national competent authority in connection with the IAEA's Regulations for the Safe Transport of Radioactive Material.

The NNR coordinates and implements South Africa's Contracting Party (CP) obligations to the IAEA (CNS), and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The Board is accountable for the overall formulation, monitoring and review of the NNR corporate strategy and related affairs, while delegating to management the responsibility for business performance and achievement of the NNR's objectives.

BOARD CHARTER

The NNR Board Charter regulates the Board in accordance with the principles of good corporate governance. The charter sets out the specific duties and responsibilities to be discharged by the Board as a unitary working group. The charter ensures that all Board members, acting on behalf of the NNR, are aware of the legislation and regulations affecting their conduct, and to ensure that the principles of good corporate governance are applied in all their dealings with respect to and on behalf of the NNR. As recommended by the King Code, the charter prescribes the Board's accountability and fiduciary duties in line with standards of best practices within the NNR's unique environment.

EMPLOYEES REPORTING TO THE CEO

Dr Mzubanzi Bismark Tyobeka
Chief Executive Officer

Mr Orion Phillips
Senior Manager: Standards Authorisations, Reviews and Assessments

Miss Ditebogo Kgomo
Senior Manager: Compliance Assurance and Enforcement

Mr Dakalo Netshivhazwaulu
Chief Financial Officer

Ms Anita Simon
Senior Manager: Corporate Support Services

Mr Gino Moonsamy
Manager: Communications and Stakeholder Relations

Ms Ntsikie Kote
Manager: Strategy, Governance and Organisational Performance

Ms Phindile Masilo
Manager: Internal Audit

Mr Fulufhelo Ndou
Manager: Legal, Compliance and Risk

CHAIRPERSON'S OVERVIEW

The NNR carries the responsibility of providing assurance for the protection of persons, property, and the environment against nuclear damage – and meets that responsibility by establishing safety standards and regulatory frameworks developed to fit the South African nuclear industry.

In this Annual Report we take a closer look at the activities conducted towards that end at all sites regulated by the NNR. The resultant health and safety of workers, the public, and the environment is assessed herein, as well as the accompanying financial aspects in accordance with Section 55 of the Public Finance Management Act (Act No. 1 of 1999).

It pleases me to report that all regulated facilities and actions were inspected and found to be generally compliant with NNR requirements, as stipulated in the conditions of licence or authorisation. There were no nuclear accidents reported in South Africa during 2017/18.

The Board fulfilled all its fiduciary duties during the period under review, and is confident that both the effectiveness and overall strength of the governance and controls framework within the NNR remain adequate. The NNR Board Charter prescribes the Board's accountability and fiduciary duties in line with standards of best practices within the NNR's unique environment.

The NNR's corporate governance framework is comprised of the NNR's enabling legislation, the NNR Act, and the PFMA – along with other tailored policies, strategies, and managerial procedures and practices. Our corporate governance framework determines how the NNR exercises its authority and the way in which it will deliver outcomes, initiatives, and programmes. A number of corporate governance practices are in place to ensure clear lines of accountability and well-defined, effective management of the NNR's performance.

These practices are overseen and supported by the following Board Committees:

- ARMCOM
- Technical Committee (TC)
- Transformation and Development Committee (TDC)

As is expected of the country's competent nuclear safety authority, the NNR fulfilled South Africa's obligations with respect to international instruments concerning the International Atomic Energy Agency's Regulations for the Safe Transport of Radioactive Material, as well as coordinating and implementing South Africa's Contracting Party obligations to the IAEA Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

The NNR continued its proud record of effective international engagement in the period under review, and worked closely with the International Atomic Energy Agency (IAEA) – including active participation in its Safety Standards Committees, several International Regulatory Fora and collaboration activities under the IAEA Global Nuclear Safety and Security Networks (GNSSN), the Multinational Design Evaluation Programme (MDEP), and attendance of its Steering Technical Committee meetings.

Six IAEA expert missions to South Africa were conducted in the 2017/18 period, related to national dose register development, radiological instrumentation training, lessons learnt on ageing management, a remediation framework, a review of the inspection programme, safety culture programmes, and integrated management system training. Seven regulatory staff participated in IAEA fellowships on inspections, accident analysis codes, and laboratory techniques.

During the period under review, the entity collected R172 548 910,00 in Authorisation Fees which was 6,26% more than the previous financial year. The State Grant collection was R38 573 000,00.

I am honoured and privileged to serve as Chairperson of the NNR, a role facilitated by the invaluable leadership and judgement of all its non-executive Directors. The NNR benefits immensely from a selection of highly committed and conscientious board members who frequently go beyond the call of duty in exercising their oversight role.

Thank you to the employees and management of the NNR for their dedication, professionalism, and commitment shown towards realising our shared vision for the future, as well as achieving the more immediate goals of the last year.

Finally, thank you to the leadership of the Department of Energy for their support throughout a period that has seen substantial changes.

Dr Thapelo Motshudi

Chairperson Board of Directors

CHIEF EXECUTIVE'S REVIEW

This is my fourth Annual Report for the NNR, since my appointment as CEO in 2013. Looking back over the year in review, I'm proud to see that we've continued to improve on the NNR's efforts to protect people and the environment from nuclear damage through our careful and committed oversight of the South African nuclear industry.

Some of the highlights of our activities in the 2017/18 period can be seen below, with expanded descriptions to be found in the body of the Annual report:

Key highlights

- The NNR achieved a performance rating of 97%
- The strong integration of risk management culture into NNR's day-to-day activities resulted in a risk maturity level of 4.8 out of 6.
- The Fraud and Corruption Prevention process yielded a year without any fraud or corruption cases reported.
- The HR department finalised the evaluation of all roles in the NNR and implemented provisions to address salary disparities in accordance with the Code of Good Practice on Equal Pay for Work of Equal Value.
- With financial assistance from the Energy and Water Sector Education and Training Authority (EWSETA), the NNR has taken on 10 learners to provide them with learning and work experience over a period of 18 months.
- A reassessment of Koeberg Nuclear Power Station (KNPS) in the Western Cape in response to information gathered subsequent to the accident at the Fukushima Daiichi Nuclear Power Plant found KNPS to be adequately designed to withstand the external events that were considered in the original design basis.
- The manufacturing of Replacement Steam Generators (RSGs) planned for installation in 2021 was progressed at various facilities, with most of the components being delivered to Shanghai Electric Nuclear Power Equipment (SENPEC) in China for their final assembly.
- Nineteen radiation monitoring stations have been installed on and around the Koeberg and Pelindaba Nuclear Sites and are being tested by the service provider and the NNR. Relevant agreements with property owners around the two Nuclear Sites have been concluded.

- Globally, the NNR fulfilled all of its obligations and maintained active participation in the IAEA Safety Standards Committees, as well as several International Regulatory Fora and collaboration activities under the IAEA Global Nuclear Safety and Security Networks (GNSSN).
- Regionally, the NNR has continued to contribute to strengthening the nuclear and radiation safety regulatory infrastructure throughout the African region through its participation in the Forum for the Nuclear Regulatory Bodies in Africa (FNRBA).
- The newly established Centre for Nuclear Safety & Security (CNSS), succeeded in concluding strategic partner agreements , and issued a Call for Proposal to Local and International Partner Institutions with a view to forging collaborative partnerships
- The NNR laboratory has started a process of acquiring SANAS accreditation for its methods/activities as required by ISO 17025 standard. The plan is to have the laboratory fully accredited by 2019/2020. As part of the accreditation process, the laboratory participates in the IAEA Worldwide open proficiency tests since 2015. To date all the NNR submitted results were acceptable for precision and accuracy (based on z-score method) and were comparable to all other participating international counterparts.

KEY CHALLENGES

- The NNR remains concerned about the degradation of the Management of Safety Culture at the Necsa NTP Radiochemicals Complex.
- The impact of the financial constraints faced by Authorisation Holders on the sustainability of the NNR

THE YEAR AHEAD

As we push ahead with our mandate in a constantly shifting and demanding environment, looking towards a safe and productive 2018/19 period, we will need to apply ourselves continually to re-fining our current policies and infrastructure as well as preparing our future staff through education opportunities.

The effort of NNR's employees in the last year are a source of pride for me. Thank you to them, and thank you to our Board's Chairperson, as well as the rest of the Board for their support and guidance during the year under review.

Dr Bismark Tyobeka

CEO

2 CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

INTRODUCTION

The NNR Board reviewed the systems and processes of the NNR timeously, and can assure stakeholders that the organisation was managed and operated in compliance with the principles incorporated in the Code of Corporate Practices and Conduct, as set out in the King III Report and the precepts of the Public Finance Management Act (PFMA), as appropriate.

PARLIAMENTARY PORTFOLIO COMMITTEE ON ENERGY

The NNR presented its 2016 – 2017 Annual Report to the Portfolio Committee on Energy (PCE) in October 2017. The PCE requested an additional briefing from the NNR Audit and Risk Management Committee. The NNR assured the committee that all nuclear installations and regulated entities under the purview of the NNR did not expose workers to undue harmful levels of ionising radiation or cause nuclear damage to the environment in 2016. The NNR successfully fulfilled its fiduciary duties and continued to discharge its mandate in accordance with best practices in governance whilst complying to regulatory and legislative requirements. The activities and findings of the Audit and Risk Management Committee (ARMCOM) were briefed in detail.

BOARD

The NNR Board is the Accounting Authority in terms of the PFMA and is appointed for a renewable period of three years by the Minister of Energy. In terms of section 8 (1) and (2), the NNR is governed and controlled in accordance with the NNR Act by a Board to ensure that the objects in the NNR Act are carried out, and to exercise general control over the performance of the regulator.

The NNR Board embraces the principles of good corporate governance and considers these as the underlying philosophy in creating organisational excellence at all levels within the NNR.

The NNR Board sets the precedent in driving the ethics of good governance and the Board members, collectively and individually, acknowledge their responsibilities and duties in terms of the NNR Board Charter and other governance, regulatory and legislative requirements.

Composition of the Board

The NNR Board comprises 11 Non-executive Directors who are independently appointed by the Minister of Energy, an Executive Director (Chief Executive Officer) and one alternate member. Board members, including the Chief Executive Officer, hold office for a maximum of three years, but are eligible for re-appointment.

Table 1: NNR Board members

NNR Board members (April 2017 – March 2018)

Title	Full name	Date appointed	Stakeholder represented
Dr	Thapelo Motshudi	7 Dec 2016	Independent Member
Dr	Pamela Dube	7 Dec 2016	Independent Member
Mr	Kabelo S Kakoma	7 Dec 2016	Independent Member
Mr	Jeffrey Leaver	7 Dec 2016	Independent Member
Dr	Bethuel Sehlapelo	7 Dec 2016	Independent Member
Ms	Devinagie Bendeman	7 Dec 2016	Independent Member
Ms	Elsie Monale	7 Dec 2016	Independent Member
Mr	Protas Phili	7 Dec 2016	Independent Member
Amb	Mochubela J Seekoe	7 Dec 2016	Independent Member
Mr	Abraham P Le Roux	7 Dec 2016	Independent Member
Ms	Bridgette M Mokoetle	7 Dec 2016	Independent Member

BOARD OF DIRECTORS

Dr Thapelo Motshudi
Chairperson

Dr Pamela Z Dube
Deputy Chairperson and Chairperson of the Transformation and Development Committee

Dr Bismark Tyobeka
Director and Chief Executive

Mr Jeffrey Leaver
Non-executive Director and Chairperson of the Technical Committee

Member of Audit and Risk Management Committee

Mr Protas Phili
Non-executive Director and Chairperson of the Audit and Risk Management Committee

Ms Devinagie Bendeman
Non-executive Director

Member of Audit and Risk Management Committee

Ms Bridgette Mokoetle
Non-executive Director

Member of Technical Committee

Ms Elsie Monale
Non-executive Director

Member of Technical Committee

Member of Transformation and Development Committee

Mr Kabelo Kakoma
Non-executive Director

Member of Audit and Risk Management Committee

Member of Transformation and Development Committee

Dr Bethuel Sehlapelo
Non-executive Director

Member of Technical Committee

Mr Abraham Le Roux
Non-executive Director

Member of Technical Committee

Amb Mochubela Seekoe*
Member of Transformation and Development Committee

** Amb Mochubela Seekoe sadly passed away during the reporting period.*

BOARD MEETINGS AND STRATEGIC WORKSHOPS

Table 2: Meetings held during the reporting period

	Date of the meeting April 2017 – March 2018								
Names	26 April 2017 Board meeting	17 May 2017 IODSA training	31 May 2017 Board strategy session	1 June 2017 Board strategy session	2 June 2017 Board strategy session	27 July 2017 Board meeting	26 October 2017 Board meeting	29 November 2017 Reorg workshop	25 January 2018 Board meeting
Dr T Motshudi (Chairperson)	P	P	P	P	P	P	P	P	P
Prof. P Dube (Deputy)	A	A	P	P	P	P	P	A	P
Ms B Mokoetle	P	P	P	P	A	P	P	P	P
Mr J Leaver	P	A	A	A	A	P	P	P	P
Ms D Bendeman	P	P	P	P	P	A	P	P	P
Mr P Phili	P	P	P	P	P	P	P	P	P
Dr MB Tyobeka	P	A	P	P	A	P	P	P	P
Ms E Monale	P	P	P	P	P	A	P	A	P
Dr B Sehlapelo	P	P	A	P	P	A	P	A	P
Mr K Kakoma	P	P	A	A	A	A	P	P	P
Mr A Le Roux	P	P	P	P	P	P	P	P	P
Ms N Kote	P	P	P	P	P	P	P	P	P
Amb MJ Seekoe	P	P	A	A	A	A	P	N/A	N/A

COMMITTEES OF THE BOARD

The following Board committees assisted the Board in discharging its mandate over the period under review:

- Audit and Risk Management Committee (ARMCOM)
- Technical Committee (TC)
- Transformation and Development Committee (TDC)

Board committees met at least once per quarter and provided feedback to the Board through committee reports. The Board committees have each adopted formal terms of reference, which are reviewed annually to ensure continued relevance.

ARMCOM

The ARMCOM comprised four Non-executive Directors. A Non-executive Director who is not the Chairperson of the Board, chaired the Committee.

The ARMCOM assisted the Board in overseeing:

- The quality and integrity of the financial statements and the disclosure thereof
- The scope and effectiveness of the internal audit function
- The effectiveness of the organisation's system of internal control

The members of the ARMCOM were:

- Mr P Phili (Chairperson)
- Mr K Kakoma
- Mr J Leaver
- Ms M Mokoetle
- Ms D Bendeman

Table 3: ARMCOM meetings convened

	Date of the meeting April 2017 – March 2018						
Names	**11 April 2017**	**18 May 2017**	**26 June 2017**	**18 July 2017**	**24 July 2017 ARMCOM special meeting – AGSA management letter and audit opinion**	**17 October 2017**	**16 January 2018**
Mr P Phili (Chairperson)	P	P	P	P	P	P	P
Mr K Kakoma	P	P	P	P	A	P	P
Mr J Leaver	P	P	P	A	A	P	P
Ms B Mokoetle	P	P	P	A	P	P	P
Ms D Bendeman	A	P	A	P	P	P	A

P Member present at the meeting

A Member not present, but tendered an apology

N/ANot applicable refers to member not yet appointed to the Board/Board Committee or member resigned from the Board/Board Committee

Technical Committee

The Technical Committee comprised five non-executive directors and two technical advisors who are experts in the technical/legal or environmental field. The role of the committee was to, inter alia:

- Review the policies and practices on the authorisation of nuclear facilities, licensing processes, compliance assurance, and enforcement procedures
- Advise the Board on all technical-related matters pertaining to the discharge of the NNR's mandate

The members of the Technical Committee were:

- Mr J Leaver (Chairperson)
- Dr B Sehlapelo
- Dr M Makgae
- Ms E Monale
- Ms B Mokoetle
- Mr P Fitzsimons
- Mr A Le Roux

Table 4: Technical committee meetings convened

	Date of the meeting April 2017 – March 2018								
Names	**12 April 2017**	**29 June 2017 Technical Committee interviews**	**12 July 2017 Technical Committee interviews**	**13 July 2017**	**26 July 2017 amendment of Act**	**18 October 2017**	**28 November 2017 amendment of Act**	**17 January 2018**	**8 March 2018 Delegation of Authority workshop**
Mr J Leaver (Chairperson)	P	P	P	A	P	P	P	P	P
Dr B Sehlapelo	A	P	P	P	A	P	A	P	P
Ms E Monale	P	A	A	A	A	P	A	P	P
Ms B Mokoetle	P	A	A	A	A	P	P	P	P
Mr P Fitzsimons	A	A	A	A	A	P	A	P	P
Dr M Makgae	A	A	A	A	A	P	P	P	P
Mr A Le Roux	A	A	A	P	A	P	P	P	P

P Member present at the meeting.

A Member not present but tendered an apology.

N/A Not applicable refers to member not yet appointed to the Board/Board Committee or member resigned from the Board/Board Committee

Transformation and Development Committee

The Transformation and Development Committee was responsible for determining human resources strategies and policies, and recommending these to the Board for approval. These include: human resources development and conditions of service; employment equity reports; performance management systems, and any other organisational development initiatives.

The members of the Transformation and Development Committee were:

- Prof P Dube (Chairperson)
- Amb MJ Seekoe
- Mr A Le Roux
- Ms E Monale
- Mr Kakoma

Table 5: Transformation and Development Committee meetings convened

	Date of the meeting April 2017 – March 2018				
Names	**13 Apr 2017**	**26 Jun 2017 Talent management and remuneration workshop**	**13 Jul 2017**	**19 Oct 2017**	**18 Jan 2018**
Prof P Dube (Chairperson)	P	P	P	P	P
Amb MJ Seekoe	P	P	P	P	N/A
Mr A Le Roux	P	P	P	P	P
Ms E Monale	A	P	P	P	P
Mr Kakoma	P	P	P	P	P

Remuneration of directors and committee members

The remuneration of Board members is determined by the Minister of Energy, with the concurrence of the Minister of Finance, and is reviewed annually. Board and committee members are remunerated for attending meetings, except if they are representatives from government departments. The details of the remuneration for the year ended 31 March 2017 are stated in note 27 to the annual financial statements on page 100.

RISK MANAGEMENT

Nature of risk management

The NNR recognises that the total process of risk management, which includes a related system of internal control, is the responsibility of the Board. Management is accountable to the Board for designing, implementing and monitoring the process of risk management, and integrating it into the day-to-day activities of the organisation, and providing assurance that it has done so. To implement the above, the NNR developed and implemented a Risk Management Policy, Strategy, and Risk Implementation Plan.

A Risk Maturity Assessment was conducted for the year under review using the National Treasury Financial Management Capability Maturity Model (FMCMM) and it revealed that the NNR risk maturity level is at 4.8 out of 6. The purpose of the risk maturity assessment was to assess the effectiveness of risk management within the organisation. This assessment assisted in establishing the extent to which the NNR has embedded risk management in its processes.

The outcome of the Risk Maturity Assessment indicated that the NNR has improved in embedding risk management culture into day-to-day activities. Aggregated risk management information was circulated to relevant officials and oversight structures as a matter of routine. Furthermore, risk and fraud awareness training sessions were rolled out all employees in the NNR. Risk champions were also trained to enable them to discharge their duties effectively and to assist their respective departments in risk management.

Risk management strategies to identify and manage risk

For the year under review, the strategic risk assessment was conducted to identify risks that could potentially impair the NNR's ability to achieve set objectives. The risk assessment was conducted following the risk assessment methodology which is embedded in the risk management strategy approved by the Board and is in line with the National Treasury Public Sector Risk Management Framework.

The identified risks were continuously monitored throughout the financial year to minimise the risk exposure and the impact it would have on achievement of the NNR's objectives, while improving performance and exploiting opportunities.

Progress made in addressing identified risks

The Risk Steering Committee met on a quarterly basis to discuss the current and potential risks facing the organisation. This committee reviewed the Risk Management Policy, Strategy, and Risk Implementation Plan on a regular basis to identify areas of improvement.

The Risk Champions also met on a quarterly basis to monitor and to ensure that actions aimed to address the identified risks were implemented during the period under review.

The following activities were carried out for all departments in conjunction with risk champions to monitor the risk profile of individual departments:

- Continuous engagement with both the risk and control owners to assess progress on the implementation of action plans
- Continuous engagement with the control owners to review the strength of the current controls
- Continuous engagement with risk owners to ensure that the risk profiles were updated on a regular basis

The Implementation of risk management action plans were monitored on a regular basis through the utilisation of a risk register and risk monitoring tool. Quarterly progress was reported to the Risk Steering Committee, which considered the progress and reported this to the executive, ARMCOM and the Board. Identification of new/emerging risks was a standing agenda item at the Risk Steering Committee. Identified risks were assessed and included in the relevant risk registers for monitoring purposes.

INTERNAL AUDIT AND ARMCOM

In accordance with the definition of internal auditing and the authority to establish and maintain an internal audit function as contained in the Public Finance Management Act (Act No. 1 of 1999 as amended by Act No. 29 of 1999) (PFMA) and its Treasury Regulations, the objective of the NNR's Internal Audit provides independent, objective, assurance and consulting services, designed to add value and improve the NNR's operations. These services help the NNR in accomplishing its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.

To ensure independence, the Internal Audit Manager reports administratively to the CEO and functionally to ARMCOM.

The responsibilities of the Internal Audit function included the following:

- Evaluating the organisation's governance processes;
- Performing an objective assessment of the effectiveness of risk management and the internal control framework; and
- Systematically analysing and evaluating business processes and associated controls.

The scope of Internal Audit function

The scope of the internal audit function included;

- Developing and implementing rolling three-year and annual audit plans based on NNR's key areas of risk, including any risks or control concerns identified by management;
- Reviewing the reliability and integrity of financial and operational information and the means used to identify, measure, classify and report such information;
- Reviewing the systems established by management to ensure compliance with those policies, plans, procedures, laws and regulations, which could have a significant impact on operations and reports, and determining whether the NNR is in compliance;
- Reviewing the means of safeguarding assets and, when appropriate, verifying the existence of assets;
- Appraising the economy and efficiency with which resources are employed;

- Reviewing operations or programmes to ascertain whether results are consistent with established objectives and goals, and whether the operations or programmes are being carried out as planned; and
- Providing a written assessment regarding the effectiveness of the system of internal and financial controls in the organisation, and submitting a report to ARMCOM to enable it to formulate its comment for the financial statement.

The annual allocation of internal audit resources to audit activities is established on the basis of an approved internal audit plan. ARMCOM remained responsible for approving the plan.

Summary of audit assignments completed:

For the 2017 – 2018 financial year, 10 internal audits were conducted in the following areas: Legislative, Risk and Compliance; Organisational Performance; Communication and Stakeholder Relations; Standards, Authorisations, Reviews and Assessments; Finance and Corporate Support Services (including Information Technology).

ARMCOM

The role of ARMCOM was to assist the Board to ensure that the NNR implemented an effective policy and plan for risk management that would enhance the organisation's ability to achieve its strategic objectives and to ensure that disclosure regarding risk was comprehensive, timely and relevant.

ARMCOM assisted the Board by reviewing the following:

a) The effectiveness of the internal control systems

b) The effectiveness of internal audit function

c) The effectiveness of the risk management system

d) The adequacy, reliability and accuracy of financial information

e) Accounting and auditing concerns identified as a result of internal and external audits

f) The NNR's compliance with legal and regulatory provisions

g) The activities of the internal audit function, including its three year rolling and annual internal audit plans, coordination with the external auditors, the reports of significant investigations and the responses of management to specific recommendations

FRAUD AND CORRUPTION

The fraud and corruption prevention process was implemented and monitored in accordance with the approved Risk Implementation Plan which detailed the activities that were undertaken for the year under review. Fraud risk assessment was conducted internally with senior managers participating in identification and reviewing of possible fraud and corruption risks. The identified fraud risks were rated according to the risk management matrix of the NNR and the risk owners were requested to provide mitigation plans to address the control deficiencies for all risks that fell outside the risk appetite. A consolidated fraud register was developed and approved by the Board. Identified action plans were allocated a start and due date to monitor progress throughout the financial year.

Monitoring and tracking of the implementation of action plans were conducted on a regular basis to manage identified fraud and corruption risks to an acceptable level within the organisation. Fraud and corruption prevention awareness training sessions were rolled out to employees of the NNR. No fraud or corruption cases were reported during the period under review.

SOCIAL RESPONSIBILITY

During the year under review, the NNR conducted local community outreach at Atteridgeville (Gauteng), Ocean View (Eastern Cape), Khayalitsha and Atlantis (Western Cape). Recruitment was implemented in terms of the NNR's transformation targets. NNR was compliant with the provisions of the PFMA and remained committed to the principles of social transformation and black economic empowerment. Notable national initiatives supported during the reporting period included; Women in Nuclear, National Women's Day, South African Young Nuclear Professionals Society, 67 Minutes for Mandela Month campaign, DoE's Learner Focus Week and National Science Week.

3 PERFORMANCE OVERVIEW

PERFORMANCE OVERVIEW

The NNR's performance continued on an upward path and the organisation achieved an overall performance rating of 97% for the period under review.

PROGRAMMES, GOALS AND OBJECTIVES

Standards, Authorisations, Reviews and Assessments (SARA) Division

Programme purpose

The SARA Division provides strategic leadership and management of regulatory processes in the following areas:

- Authorisation for Nuclear Vessel Licences (NVL), Nuclear Installations (NIL), Certificate of Registrations (COR) and Certificates of Exemption (COE). The programme produces standards related to the core themes such as risk analysis applied to scientific, engineering and technological issues.
- Conducting reviews and assessments with regard to design safety, environmental and radiation protection, operational safety, emergency preparedness and nuclear security.
- Managing special projects such as the application of outcomes from the Fukushima project, radiation protection regulation and nuclear New Build.
- Ensuring research and development is conducted on emerging issues regarding nuclear and radiation safety.

Strategic outcome-orientated goal aligned to the programme

- To provide efficient and effective nuclear regulatory services

Strategic objectives

- To authorise nuclear and radiation facilities and activities through reviews and assessments and the development of safety and security standards
- To position the NNR to respond to initiatives relating to nuclear expansion taking into account the transition between licensing stages
- To undertake applied research, training and development to meet the regulatory needs
- To fulfill international obligations related to nuclear and radiation safety and security
- To provide assurance of the effectiveness of emergency preparedness and readiness to respond to nuclear and radiological emergencies
- To foster development of regulatory and technical services

Compliance Assurance and Enforcement (CAE) Division

Programme purpose

The CAE Division provides strategic leadership and management of the compliance and enforcement activities, processes and programmes for all the regulated nuclear facilities and activities.

The CAE Division ensures the establishment of effective and efficient delivery systems related to the compliance assurance and enforcement activities in nuclear safety and security. This includes conducting compliance assurance inspections, audits, investigations, surveillances, environmental monitoring and sampling.

Strategic outcome-orientated goal aligned to the programme

- To provide efficient and effective nuclear regulatory services

Strategic objective

- To provide assurance of compliance with regulatory requirements through a system of compliance assurance inspections, audits and exercises and to take appropriate enforcement actions

Communication and Stakeholder Relations

Programme purpose

The Communication and Stakeholder Relations Office provides strategic stakeholder advisory services and leads the NNR corporate communication initiatives. The office works with technical experts to develop plain language communication products and information design for various target audiences. It coordinates and manages responses to enquiries from parliament, media, public and other key stakeholders.

The office focuses on the NNR's commitment to inspiring a climate of stakeholder respect, trust and confidence by working openly and transparently with stakeholders. The office also manages international liaison and coordination of nuclear safety regulatory cooperation agreements with national and international counterparts.

Strategic outcome-orientated goal aligned to the programme

Improve awareness of the NNR and strengthen stakeholder relations.

Strategic objectives

- To improve public communications and face-to-face stakeholder engagement
- To strengthen national and international co-operation

Financial Management

Programme purpose

This programme provides strategic financial leadership for the purposes of managing and directing the finances of the NNR. The management function includes financial planning, financial reporting, safeguarding of assets and enforcing adherence to applicable legislation, effective supply chain processes and efficient usage of public funds. The programme also includes an oversight role in implementing financial systems that support robust systems of internal control.

Strategic outcome-orientated goal aligned to the programme

- Ensure the financial viability and sustainability of the organisation

Strategic objectives

- To ensure that the NNR remains a financially viable entity, i.e. adequate revenue to meet strategic objectives
- To ensure sound and compliant financial management within the NNR

Corporate Support Services

Programme purpose:

This programme provides strategic leadership and direction in the areas of human capital management, facilities management, information and communication technology (ICT) as well as occupational health and safety. The primary focus of the programme is ensuring efficient processes and resources in support of the organisation's strategic objectives.

Strategic outcome-orientated goals aligned to the programme

- High performance culture
- Develop and maintain sound organisational infrastructure
- Ensure effective human capital management

Strategic objectives

- Develop and maintain an adequate and stable organisational infrastructure
- Define and establish an integrated management system and programme
- Implement an integrated talent management system

Internal Audit

Programme purpose

Internal audit provides assurance to the NNR stakeholders that the NNR operates in a responsible manner by performing, among others, the functions described in the Corporate Governance section.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- Improve and maintain an effective system of internal controls

Legal, Compliance and Risk Management

Programme purpose

The purpose of this function is to provide the NNR with comprehensive legal advice, support on all legal matters and ensuring compliance to applicable prescripts and legislation. This programme is also responsible for risk management, which is a systematic and formalised process instituted by the NNR to identify, assess, manage and monitor risks.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- Improve and maintain an effective system of internal controls

PERFORMANCE OVERVIEW

Strategy, Governance and Organisational Performance

Programme purpose

The purpose of this function is two-fold. Firstly, to assure the effective and efficient functioning of the Board, its committees and all other internal governance structures. This is done by assisting the Board to discharge its roles and responsibilities by providing guidance on good corporate governance principles and practices. This is also implemented through consistent and responsive administrative and effective logistical support.

The programme also ensures the formulation, development and planning of the organisation's strategy by the Board and the Executive, with a view to enabling the execution of its mandate in line with the Act. This is done by utilising a strategic plan aligned to the national planning framework for state owned enterprises.

Secondly, the function also monitors and evaluates organisational performance at both operational and strategic levels, providing performance-enhancing solutions that address performance gaps to aid in the attainment of performance targets and intended outcomes. These solutions include the implementation of appropriate quality management systems and operational excellence tools.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- Manage and implement the organisational governance programme in line with relevant protocols


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PERFORMANCE OVERVIEW

Performance Information 2017 – 2018

The performance information covers the 2017 – 2018 financial year. It is computer-based on the evaluation of the achievement of stated annual performance targets, which contained 16 strategic objectives and 27 KPIs (SARA:12; CAE 2; Administration:13).

The Annual Performance Plan for 2017 – 2018 had 16 strategic objectives and 27 KPIs (SARA:12; CAE 2; Administration 13).

Below is the table of performance results.

Strategic goal	Strategic objective	Measure	Key performance indicator
To provide efficient and effective nuclear regulatory services	1. To authorise nuclear and radiation facilities and activities through reviews and assessments and the development of safety and security standards	RM1a: Reviews and assessments	RM1a: Reviews and assessments undertaken
		RM1b: Regulatory framework	RM1b: Updated regulatory framework
		RM1c: IRRS Mission Action Plan	RM1c: IRRS Mission Plan implementation
	2. To position the NNR to respond to initiatives relating to nuclear expansion taking into account the transition between licencing stages	RM2: NISL Applications	RM2: Reviews and assessments undertaken
	3. Undertake applied research, training and development to meet the regulatory needs	RM3: Research Projects	RM3: Research studies undertaken
	4. Fulfil international obligation related to nuclear and radiation safety and nuclear security	RM4a: Participation in the CNS Review Meeting	RM4a: Level of participation in the CNS Meeting
		RM4b: Joint Convention Report	RM4b: Submission of Joint Convention Report
	5. Provide assurance of the effectiveness of emergency preparedness and readiness to respond to nuclear and radiological emergencies	RM5a: Emergency preparedness	RM5a: Regulatory response during an emergency
		RM5b: Emergency preparedness	RM5b: Emergency exercises and inspections conducted
	6. Foster development of regulatory and technical services	RM6a: CNSS establishment	RM6a: Strategic initiatives for the development of the CNSS undertaken

	Actual achievement 2016/17	Planned target 2017/18	Actual achievement 2017/2018	Comment on variance
	100%	100% of identified strategic activities	100%	A total of 1 236 of 1 189 planned reviews, meaning the regulator processed 47 more reviews and assessments overall. The reviews can be segments as follows: NPP: 216/196 NTWP: 282/280 NORM: 350/350 SGR: 388/363
	80.5%	100% of identified strategic activities	100%	
	New KPI for 2017/18	100% of identified strategic activities	98%	There was a shortfall in the delivery of the following strategic initiatives: cooperative governance workshop, structure model and funding of the CNSS, implementation of the safety and security plan
	New KPI for 2017/18	100% of identified strategic activities	Set aside	Whilst some strategic initiatives have been implemented, the actual KPI has been set aside due Eskom's own postponement of the submission of the safety case and also due to the court ruling on new nuclear build.
	New KPI for 2017/18	100% of funded initiatives	100%	
	New KPI for 2017/18	100% participation	100%	
	New KPI for 2017/18	100% participation	100%	
	100%	100% of identified strategic activities	100%	
	100%	100% of identified strategic activities	100%	
	New KPI for 2017/18	100% of identified strategic activities	84%	The business plan of the CNSS was delayed for finalisation by year end. This has been rolled over to the 18/19 FY performance plan

PERFORMANCE OVERVIEW

Strategic goal	Strategic objective	Measure	Key performance indicator	
To provide efficient and effective nuclear regulatory services	6. Foster development of regulatory and technical services	RM6b: Regulatory and technical services	RM6b: Established criteria for approval of technical services providers (dosimetry, calibration, labs, instrumentation and RPO)	
		RM6c: Independent verification	RM6c: Laboratory operationalisation	
	7. Provide assurance of compliance with regulatory requirements through a system of compliance assurance inspections, audits and exercises and take appropriate enforcement actions	RM7a: Compliance assurance activities	RM7a: CAP implementation	
		RM7b: Inspector training programme	RM7b: Inspector training manuals developed	
Improve awareness of the NNR and strengthen stakeholder relations	8. Improve public communication and face-to-face stakeholder engagement	RM8a: NISL Public Participation	RM8a: Implement information sharing sessions	
		RM8b: Public Outreach	RM8b: Implement the activity schedule	
	9. Strengthen national and international co-operation	RM9: Bilateral and international obligations	RM9: Implement the activity schedule	
Ensure financial viability and sustainability of the organisation	10. Ensure that the NNR remains a financially viable entity, i.e. adequate revenue to meet strategic objectives	FM1: Financial management	FM1: adequacy of funding for regulatory activities	
	11. Ensure sound and compliant financial management within the NNR	FM2: External audit outcomes	FM2: Unqualified report	
Develop and maintain sound organisational infrastructure	12. Develop and maintain an adequate and stable organisational infrastructure	PM1: Actual versus plan of the Cape Town office construction	PM1: Implementation of the Cape Town office construction project plan	
High Performance Culture	13. Define and establish an integrated management system and programme	PM2: Knowledge management strategy	PM2: % of agreed deliverables as per plan	

	Actual achievement 2016/17	Planned target 2017/18	Actual achievement 2017/2018	Comment on variance
	100%	100% of identified strategic activities	100%	
	100%	100% of the plan	100%	
	Inspections NPP; 56/56 NTWP:144/144 NORM:126/126 NucSec:16/16 Audits NPP: 2/2 NTWP: 6/6 NORM:14/14 100%	Inspections NPP: 56 NTWP: 144 NORM: 80 NucSec:16 Audits NPP: 2 NTWP: 6 NORM: 8	Inspections NPP 56/56 NTWP 144/144 NORM: 80/80 NucSec: 16/16 Audits NPP 2/2 NTWP: 6/6 NORM: 8/8 100%	
	New KPI for 2017/18	100% of the project plan	100%	
	New KPI for 2017/18	6 sessions	Set aside	Set aside due to court ruling on nuclear new build
	100%	100% of activity schedule	100%	
	100%	100% of activity schedule	100%	
	100%	Adequacy of funding	91%	The slow turnaround time in the collection of old debtors contributed to this performance.
	100%	Unqualified report	100%	
	New KPI for 2017/18	100% of the plan	50%	The project suffered a major delay owing to the consideration of the CoCT. The schedule could not be recovered in line with the project plan after conditional approval was granted. The project will be re-baselined for the 2018/19 performance plan
	New KPI for 2017/18	100% delivery of key milestones	100%	

Strategic goal	Strategic objective	Measure	
Enhance good governance	14. Manage and implement the organisational governance programme in line with relevant protocols	PM3: Independent and effective governance structures	
	15. Improve and maintain an effective system of internal controls	PM4a: Quarterly reports on legislation and policy framework	
		PM4b: Risk management plan	
		PM4c: Internal audit plan	
Effective human capital management	16. Implement an integrated talent management system	LM1a: Talent management Annual Plan and HR Processes	
		LM1b: Staffing strategy	

	Key performance indicator	Actual achievement 2016/17	Planned target 2017/18	Actual achievement 2017/2018
	PM3: Implementation of governance and strategy programme	100%	100% of identified strategic initiatives	100%
	PM4a: Compliance with applicable legislation and policy framework	New KPI for 2017/18	4 quarterly reports	100%
	PM4b: Effective execution of the risk management of risks	68%	100% of the plan	100%
	PM4c: Effective implementation of the internal audit plan	100%	10 audits	100%
	LM1a: Implementation of the talent management plan	0%	100% of the plan	100%
	LM1b: Develop staffing strategy	New KPI for 2017/18	100% of identified strategic actions	100%
				97%

PERFORMANCE OVERVIEW

CHALLENGES ENCOUNTERED BY THE NNR DURING 2017 – 2018

- During the review period the NNR remained concerned about the degradation of the Management of Safety Culture at the Necsa NTP Radiochemicals Complex. Additionally the impact of the financial constraints faced by the Authorisation Holders on the sustainability of the NNR was a concern for the NNR.
- The impact of the financial constraints faced by Authorisation Holders on the sustainability of the NNR
- The recruitment of experienced engineers continued to pose a problem. However, the NNR engineering bursary recipients are progressing well and it is hoped that, on completion of their studies, they will assist in addressing the scare skills issues faced by the NNR.

LINKING PERFORMANCE WITH BUDGETS

The table below indicates the resource allocations and the utilisation for all the key objectives, respectively.

Table 8: 2017-2018 performance with budgets

			2017/2018			2016/2017		
Programme	**Code**	**Description**	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**
To process applications for nuclear authorisations in a timely and accurate manner	135, 137, 138, 146, 147	Personnel	**50 904**	**42 600**	**8 304**	41 967	39 845	2 122
		Goods and services	**47 876**	**27 054**	**20 822**	39 209	9 391	29 818
	Total		**98 780**	**69 654**	**29 126**	**81 176**	**49 236**	**31 940**
To ensure effective implementation of nuclear security measures by authorisation holders	139 and 175	Personnel	**2 924**	**2 459**	**465**	1 944	1 829	115
		Goods and services	**1 030**	**575**	**455**	720	624	96
	Total		**3 954**	**3 034**	**920**	**2 664**	**2 453**	**211**
To establish an independent verification capability for the NNR	136 and 140	Personnel	**19 576**	**18 677**	**899**	16 407	14 672	1 735
		Goods and services	**6 788**	**4 587**	**2 201**	5 537	4 512	1 025
	Total		**26 364**	**23 264**	**3 100**	**21 944**	**19 184**	**2 760**
To provide assurance of safety performance of authorisation holders through inspections, audits, investigation and taking enforcement action for identified non-compliance	171, 172, 173 and 174	Personnel	**30 108**	**25 932**	**4 176**	26 706	24 034	2 672
		Goods and services	**4 069**	**2 422**	**1 647**	2 779	2 249	530
	Total		**34 177**	**28 354**	**5 823**	**29 485**	**26 283**	**3 202**
Good governance	124, 125, 126, 127 and 128	Personnel	**12 930**	**11 390**	**1 540**	12 435	11 327	1 108
		Goods and services	**13 185**	**5 468**	**7 717**	5 239	3 734	1 505
	Total		**26 115**	**16 858**	**9 257**	**17 674**	**15 061**	**2 613**
Financial viability and sustainability	156 and 158	Personnel	**9 645**	**23 306**	**(13 661)**	8 332	22 549	(14 217)
		Goods and services	**23 518**	**27 433**	**(3 915)**	24 522	26 599	(2 077)
	Total		**33 163**	**50 739**	**(17 576)**	**32 854**	**49 148**	**(16 294)**
High performance culture, effective human capital management	141, 142, 144, 145 and 155	Personnel	**8 390**	**8 662**	**(272)**	6 244	5 136	1 108
		Goods and services	**17 537**	**14 808**	**2 729**	10 139	6 523	3 616
	Total		**25 927**	**23 470**	**2 457**	**16 383**	**11 659**	**4 724**
Sound organisational infrastructure	143	Personnel	**2 784**	**2 849**	**(65)**	2 391	2 569	(178)
		Goods and services	**17 864**	**10 822**	**7 042**	13 162	8 611	4 551
	Total		**20 648**	**13 671**	**6 977**	**15 553**	**11 180**	**4 373**
Stakeholder relations and corporate image	129	Personnel	**2 734**	**2 574**	**160**	2 385	2 370	15
		Goods and services	**6 371**	**4 324**	**2 047**	2 836	2 795	41
	Total		**9 105**	**6 898**	**2 207**	**5 221**	**5 165**	**56**

Table 9: Revenue

	2017/2018			2016/2017		
	Budget	Actual	Variance under/(over)	Budget	Actual	Variance under/(over)
Sources of revenue	**R'000**	**R'000**	**R'000**	**R'000**	**R'000**	**R'000**
Authorisation fees	**170 776**	**172 549**	**(1 773)**	156 676	161 755	(5 079)
State grant	**38 573**	**38 573**	**–**	40 936	40 936	–
Other income	**27 369**	**39 606**	**(12 237)**	25 342	21 808	3 534
Total	**236 718**	**250 728**	**(14 010)**	**222 954**	**224 499**	**(1 545)**

SUMMARY OF FINANCIAL INFORMATION

Revenue collection

The NNR is mainly funded from Authorisation Fees and State Grants (conditional and unconditional) in the form of transfers. The NNR invoiced R173 million in Authorisation Fees which is 7% more than the previous financial year. This is consistent with the 6% annual increase in fees for the year under review. The appropriated funds transferred from the fiscus for the year was R39 million as appropriated on the Appropriation Bill. Application Fees significantly increased by 180% from the previous financial year due to Thyspunt site NISL application processing.

Table 10: Programme expenditure for support services, standards, authorisations, reviews and assessment, compliance assurance and enforcements

			2017/2018			2016/2017		
Programme	**Code**	**Description**	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**
Administration	124-129; 141-145; 156-158	Personnel	**34 105**	**46 512**	**(12 407)**	41 967	39 845	2 122
		Goods and services	**73 573**	**55 960**	**17 613**	39 209	9 391	29 818
	Total		**107 678**	**102 472**	**5 206**	**81 176**	**49 236**	**31 940**
Standards, authorisations and Review Assessments	135-140; 146-147; 147-155	Personnel	**75 785**	**66 004**	**9 781**	1 944	1 829	115
		Goods and services	**60 593**	**39 112**	**21 481**	720	624	96
	Total		**136 378**	**105 116**	**31 262**	**2 664**	**2 453**	**211**
Compliance, Assurance and Enforcement	171-174	Personnel	**30 108**	**25 933**	**4 175**	16 407	14 672	1 735
		Goods and services	**4 069**	**2 421**	**1 648**	5 537	4 512	1 025
	Total		**34 177**	**28 354**	**5 823**	**21 944**	**19 184**	**2 760**

Support services

This programme incurred expenditure on compensation of employees of R47 million for the year under review, which is 6% more than the previous financial year. This increase is attributed to the annual cost of living adjustment negotiated and implemented during the year under review. The three years' annual cost of living adjustment agreement with the recognised labour union comes to an end in the year under review. The R14 million variance indicated above is attributed to Performance Bonus, Job Grading implementation and promotions effected during the year. All these activities were budgeted and provided for at relevant cost centres but paid centrally, the overall expenditure for the organisation was on target with a variance below percent.

The division's performance on goods and services was R56 million, which is 16% over the previous financial year. The expenditure reported is 16% below the target mainly due to expenditure the delays in approval of Authorisation Fees which forces the organisation to delay some activities towards year end when approval is received to avoid cash flow challenges.

SARA

This division's expenditure on compensation of employees for the year under review was R66 million, which is R10 million more than the previous financial year. This 17% increase is attributed to the annual cost of living adjustment implemented in the year under review and the filling if vacancies towards the end of the previous financial year.

The programme overspent on goods and services by R17 million which is 79% over the targeted budget. The over-expenditure is attributed to consultation and professional work carried out on Eskom's Nuclear Installation Site Licence and the Koeberg power station's steam generator replacement projects. These two projects are dependent on the operator's deliverables and therefore the regulator from time to time revises its activities to align with the changes thereto.

CAE

The Compliance Assurance and Evaluation division spent R26 million for the year under review which is equivalent to 86 % of its budget. The remaining 14% is attributed to performance bonuses and Job Evaluation outcomes implementation. The under expenditure of 40% on goods and services is attributed to development of inspector's training programme which is ongoing.

Table 11: The capital investment, maintenance and asset management plan

	2017/2018			2016/2017		
Sources of revenue	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**	**Budget R'000**	**Actual R'000**	**Variance under/ (over) R'000**
Regulatory emergency control centre	**4 282**	**541**	**3 741**	6 447	2 165	4 282
Cape Town office accommodation	**10 789**	**1 405**	**9 384**	11 497	708	10 789
Total	**15 071**	**1 946**	**13 125**	**17 944**	**2 873**	**15 071**


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4 HUMAN RESOURCES MANAGEMENT

HUMAN RESOURCES MANAGEMENT

OVERVIEW

During the period under review, the HR Department finalised the evaluation of all roles in the NNR and implemented provisions to address pay disparities in accordance with the Code of Good Practice on Equal Pay for Work of Equal Value. The NNR also finalised the new organisational structure which is meant to improve efficiencies and promote teamwork. This structure will be rolled out in the next financial year.

HR priorities and their impact for the period under review

The job evaluation process and new customised job evaluation system was implemented and will contribute towards the NNR's drive to achieve fairness and equity in all our internal processes. All employees completed their competence assessments, and training and development initiatives will be focused on closing identified gaps. The new organisational structure was approved following intensive communication and engagement with employees and internal stakeholders.

Workforce planning framework and key strategies to attract and recruit a skilled and capable workforce

The NNR continued to support the ongoing development of employees to meet its future needs through bursaries and scholarships that are funded by international partners. The NNR with financial assistance from the Energy and Water Sector Education and Training Authority (EWSETA) engaged 10 learners who will be provided with work experience and learning over an 18 month period. The NNR continued to benefit from its relationships with other regulators and international funders to provide for the ongoing professional development of employees.

Employee performance management framework

The employees' individual performance management framework is fully integrated with both organisational and departmental strategic initiatives, thus ensuring synergy between organisational and individual performance.

Employee wellness programmes

During the review period, the NNR continued to implement programmes focused on the physical and mental well-being of employees.

Policy development

In accordance with the management system plan, the following HR documents were developed and approved during the period under review:

- Competence management process
- Conditions of employment framework
- Code of conduct and ethics framework
- Handling of sexual harassment framework
- Training and development process
- Induction process
- Management of interns process
- Recruitment and selection process
- Management of poor work performance process
- Employee assistance programme process

HR oversight statistics

Table 12: Employee cost by salary band

Category	Personnel expenditure R'000	% of employee to total personnel cost	Number of employees	Average personnel cost per employee R'000
Top Management (F)	2 549	2	1	2 549
Senior Management (E)	3 644	3	2	1 822
Professionally Qualified (D)	97 806	75	89	1 099
Skilled (C)	24 232	19	46	527
Semi-skilled (B)	865	1	4	216
Interns	920	1	12	77
Total	**130 016**	**100**	**154**	**6 290**

Table 13: Performance rewards

Category	Performance rewards R'000	% of employee to total personnel cost	Average personnel cost per employee R'000
Top Management (F)	287	0	130 016
Senior Management (E)	308	0	130 016
Professionally Qualified (D)	7 328	6	130 016
Skilled (C)	1 368	1	130 016
Semi-skilled (B)	76	0	130 016
Interns	–	0	130 016
Total	**9 367**	**7**	**130 016**

Table 14: employment and vacancies at financial year end

Permanent employees	138
Interns and learners	12
Temporary employees	4
Vacant positions	21

Table 15: Employment changes

The following changes were made to give effect to the new organisational structure:

Ms D Kgomo	Executive: Nuclear Technology and NORM
Mr O Phillips	Executive: Nuclear Power Plant

Table 16: Employee relations: Misconduct and disciplinary action

Nature of disciplinary action	Number
Verbal warning	0
Written warning	0
Final written warning	0
Dismissal	0

Table 17: Employment equity statistics (as per the EE report filed in October 2017)

	Male								Female								Foreign national			
Level	**A**	**%**	**C**	**%**	**I**	**%**	**W**	**%**	**A**	**%**	**C**	**%**	**I**	**%**	**W**	**%**	**M**	**%**	**F**	**%**
F	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	1	50	0	0	0	0	1	50	0	0	0	0	0	0	0	0	0	0
D	31	35	9	10	6	7	11	13	22	25	0	0	2	2	2	2	3	3	2	2
C	11	28	0	0	0	0	0	0	22	56	1	3	0	0	5	13	0	0	0	0
B	1	25	0	0	0	0	0	0	2	50	0	0	0	0	1	25	0	0	0	0
Total	**44**	**33**	**10**	**7**	**6**	**4**	**11**	**8**	**47**	**35**	**1**	**1**	**2**	**1**	**8**	**6**	**3**	**2**	**2**	**1**

Table 18: Staff with disabilities

	Male				Female				Foreign national	
Level	**A**	**C**	**I**	**W**	**A**	**C**	**I**	**W**	**M**	**F**
F	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0
D	0	0	0	1	1	0	0	0	0	0
C	0	0	0	0	1	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**

2% of employees have physical disabilities

5 REGULATION OF NUCLEAR ACTIONS

REGULATION OF NUCLEAR ACTIONS

List of authorisations active for the period under review

Authorisation No	Var	Nuclear facilities	Date issued	B #
NIL-01	18	Koeberg Nuclear Power Station	8 October 2013	NIL02B0296
NIL-02	3	SAFARI – 1 Research Reactor	21 May 2012	NIL02B0296
NIL-03	1	P2700 Complex	4 May 2012	NIL03B0041
NIL-04	0	Thabana Complex comprising the following facilities: • Thabana Pipe Store • Thabana Radioactive Waste Storage facility • Thabana Containerised Radioactive Waste Storage facility CaF2 Ponds	30 October 2009	NIL04B0001
NIL-05	1	HEU Vault – K0090	4 May 2012	NIL05B0004
NIL-06	0	A-8 Decontamination Facility	11 May 2010	NIL06B0001
NIL-07	0	Building A-West Drum Store	9 February 2009	NIL07B0001
NIL-08	1	ELPROD in Building P-2500	4 May 2012	NIL08B0039
NIL-09	1	UMET in Building P2600	28 October 2011	NIL09B0004
NIL-10	0	Conversion Plant Complex	5 August 2010	NIL10B0001
NIL-11	1	Area 14 Waste Management Complex	18 April 2011	NIL11B0009
NIL-12	0	Quarantine Storage Facility	8 October 2009	NIL12B0001
NIL-13	0	V-YB Pelindaba East Bus Shed Complex	30 October 2009	NIL13B0001
NIL-14	0	Pelindaba East Evaporation Ponds Complex	30 October 2009	NIL14B0001
NIL-15	0	Oil Purification Facility	30 October 2009	NIL15B0001
NIL-16	0	Area 21 Storage Facility	11 May 2010	NIL16B0001
NIL-17	0	BEVA K3 Storage Complex	2 November 2009	NIL17B0001
NIL-18	0	Area 16 Complex	11 May 2010	NIL18B0001
NIL-19	1	Area 40 Complex	1 Nov 2011	NIL19B0012
NIL-20	0	Area 27 De-Heeling Facility	11 May 2010	NIL20B0001
NIL-21	0	J-Building	24 November 2009	NIL21B0001
NIL-22	0	D-Building	5 August 2010	NIL22B0001
NIL-23	0	C-Building	12 May 2010	NIL23B0001
NIL-24	0	Building P-2900	24 November 2009	NIL24B0001
NIL-25	0	Building XB	11 May 2010	NIL25B0001
NIL-26	0	BEVA Evaporation Ponds	11 January 2010	NIL26B0001
NIL-27	0	Building P-2800	11 May 2010	NIL27B0001
NIL-28	1	Vaalputs National Radioactive Waste Disposal Facility	18 April 2011	NIL28B0010
NIL-29	1	Area 26	3 July 2013	NIL29B0027
NIL-30	0	E-Building	5 August 2010	NIL30B0001
NIL-31	0	Dorbyl Camp	25 October 2010	NIL31B0001
NIL-32	0	X-Building	25 October 2010	NIL32B0001
NIL-33	0	Building P-1500	25 October 2010	NIL32B0001
NIL-34	0	YM Vacuum Workshop	5 August 2010	NIL34B0001
NIL-35	0	V-H Building Laboratories	25 October 2010	NIL35B0001
NIL-36	0	P-1900 Laboratories	5 August 2010	NIL36B0001

Authorisation No	Var	Nuclear facilities	Date issued	B #
NIL-37	0	P-1600 Laboratories	16 September 2010	NIL37B0001
NIL-38	0	Fuel Development Laboratories Complex	16 September 2010	NIL38B0001
NIL-39	0	NTP Radiochemicals Complex	6 August 2010	NIL39B0001
NIL-40	0	Pelindaba Analytical Laboratories (PAL) in Building BEVA-E1	5 August 2010	NIL40B0001
NIL-41	1	Liquid Effluent Treatment Facility Complex	24 February 2011	NIL41B0006
NIL-42	0	B-1 Building Basement	20 January 2012	NIL42B0001

	COR number	Name of COR Holder	Category	Type of COR issued
1	COR-2	Anglogold Ashanti Limited: Vaal River Operations	Category 5	Mining and Mineral Processing
2	COR-3	Anglogold Ashanti Limited – West Wits Operations	Category 5	Mining and Mineral Processing
3	COR-5	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (Tshepong, Matjhabeng & Bambani Operations)	Category 5	Mining and Mineral Processing
4	COR-6	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (Joel operation)	Category 4	Mining and Mineral Processing
5	COR-7	African Rainbow Minerals Gold Limited (Welkom Operations)	Category 4	Mining and Mineral Processing
6	COR-10	Avgold Limited – Target Division	Category 4	Mining and Mineral Processing
7	COR-11	Gravelotte Mines Limited	Category 4	Mining and Mineral Processing
8	COR-13	MTC Demolition	Category 2	Scrap Processor
9	COR-16	Nuclear Fuels Corporation of SA (Pty) Limited	Category 3	Mining and Mineral Processing
10	COR-18	South Deep Join Venture	Category 5	Mining and Mineral Processing
11	COR-20	Foskor Limited (Phalaborwa)	Category 4	Mining and Mineral Processing
12	COR-23	Steenkampskraal Monazite Mine (Pty) Limited	Category 4	Mining and Mineral Processing
13	COR-25	Eggerding SA (Pty) Limited	Category 2	Mining and Mineral Processing
14	COR-26	Richards Bay Iron and Titanium (Pty) Limited	Category 4	Mining and Mineral Processing
15	COR-27	Foskor Limited (Richards Bay)	Category 3	Fertiliser Manufacturer
16	COR-28	Randfontein Estates Limited-(Kusasaletheu)	Category 4	Mining and Mineral Processing
17	COR-30	Mine Waste Solutions (Pty) Limited	Category 4	Mining and Mineral Processing
18	COR-31	Ya-Rona Scrap Metals	Category 2	Scrap Processor
19	COR-33	Rampete Metal Processors (Pty) Ltd	Category 2	Scrap Processor
20	COR-37	Harmony Gold Mining Company Limited (Free State Operations)	Category 5	Mining and Mineral Processing
21	COR-38	Omnia Phosphates (Pty) Ltd	Category 3	Fertiliser Manufacturer
22	COR-40	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (St Helena Operations)	Category 4	Mining and Mineral Processing
23	COR-43	Tronox KZN Sands	Category 4	Mining and Mineral Processing
24	COR-47	Grootvlei Properties Mines Ltd	Category 4	Mining and Mineral Processing
25	COR-48	DRDGOLD Limited	Category 1	Mining and Mineral Processing
26	COR-50	Rappa Resources (Pty) Limited	Category 1	Mining and Mineral Processing
27	COR-51	Consolidated Modderfontein (Pty) Limited	Category 4	Mining and Mineral Processing
28	COR-52	Nigel Gold Mining Company Limited	Category 4	Mining and Mineral Processing
29	COR-53	East Rand Proprietary Mines Limited	Category 4	Mining and Mineral Processing

	COR number	Name of COR Holder	Category	Type of COR issued
30	COR-57	Crown Gold Recoveries Pty) Limited	Category 4	Mining and Mineral Processing
31	COR-58	Harmony Gold Mining Company Limited – Randfontein Operations	Category 4	Mining and Mineral Processing
32	COR-59	Industrial Zone Limited	Category 4	Mining and Mineral Processing
33	COR-61	Sedex Minerals	Category 1	Mining and Mineral Processing
34	COR-64	Potchefstroom Plastiek Herwinning BK	Category 1	Scrap Processor
35	COR-66	Mintek	Category 1	Small user
36	COR-69	Sibanye Gold Limited (Driefontein Operations)	Category 4	Mining and Mineral Processing
37	COR-70	Sibanye Gold Limited (Kloof Operation)	Category 5	Mining and Mineral Processing
38	COR-71	Sibanye Gold Limited (Beatrix Operation)	Category 5	Mining and Mineral Processing
39	COR-77	Anglo American Research Laboratories (Pty) Limited	Category 1	Small user
40	COR-74	Durban Roodepoort Deep Mine	Category 4	Mining and Mineral Processing
41	COR-79	Durban Roodepoort Deep Limited	Category 4	Mining and Mineral Processing
42	COR-80	Mogale Gold (Pty) Ltd	Category 4	Mining and Mineral Processing
43	COR-84	The Big Bin CC	Category 2	Scrap Processor
44	COR-86	Glenover Phosphate Limited (Mining Site) Operation)	Category 4	Mining and Mineral Processing
45	COR-87	Rand Refinery Limited	Category 1	Mining and Mineral Processing
46	COR-92	The Forensic Science Laboratory, SA Police	Category 1	Small user
47	COR-100	South African Airforce (SAAF), Department of Defence (DoD), RSA	Category 3	Mining and Mineral Processing
48	COR-101	The Reclamation Group (Pty) Ltd (Richards Bay)	Category 2	Scrap Processor
49	COR-106	Mineral Sands Resources Pty Ltd	Category 1	Mining and Mineral Processing
50	COR-107	Vesuvius South Africa (Pty) Ltd	Category 2	Mining and Mineral Processing
51	COR-109	SM Mining Construction Pty Ltd	Category 2	Mining and Mineral Processing
52	COR-110	Geotron Systems (Pty) Limited	Category 1	Small user
53	COR-111	Bosveld Phosphate	Category 3	Fertiliser Manufacturer
54	COR-112	Scaw Metals Group	Category 2	Scrap Processor
55	COR-114	Interwaste Pty Ltd	Category 2	Scrap Processor
56	COR-116	Business Venture Investment 1692 Proprietary Limited	Category 4	Mining and Mineral Processing
57	COR-117	Vic Ramos CC	Category 2	Scrap Processor
58	COR-118	GoldPlats Recovery Ltd	Category 1	Mining and Mineral Processing
59	COR-131	East Rand Beneficiation (Pty) Ltd	Category 4	Mining and Mineral Processing
60	COR-135	Tioxide SA (Pty) Ltd	Category 2	Mining and Mineral Processing
61	COR-137	Manos Engineering (Pty) Ltd	Category 1	Scrap Processor
62	COR-138	Bright Refining (Pty) Ltd	Category 2	Mining and Mineral Processing
63	COR-140	China African Precious Metals (Pty) Ltd	Category 4	Mining and Mineral Processing
64	COR-141	Palabora Copper (Pty) Ltd	Category 4	Mining and Mineral Processing
65	COR-142	Pan African Resources – Evander Gold Mining	Category 4	Mining and Mineral Processing
66	COR-143	Zirco Roode Heuwel	Category 1	Mining and Mineral Processing
67	COR-144	Scamont Engineering (Pty) Ltd	Category 1	Scrap Processor
68	COR-148	Saldanha Dry Bulk Terminal Cc	Category 2	Service provider

	COR number	Name of COR Holder	Category	Type of COR issued
69	COR-149	Cronimet RSA (Pty) Ltd	Category 2	Scrap Processor
70	COR-150	Minrite (Pty) Ltd	Category 2	Mining and Mineral Processing
71	COR-151	Covalent Water Company (Pty) Ltd	Category 4	Mining and Mineral Processing
72	COR-152	SGS South Africa (Pty) Ltd (Cooke operations)	Category 1	Small user
73	COR-153	Resource Reference Materials (Pty) Ltd	Category 2	Small user
74	COR-159	North West Reclaiming	Category 2	Scrap Processor
75	COR-160	Shiva Uranium One	Category 5	Mining and Mineral Processing
76	COR-156	Necsa, Calibration Pads	Category 1	Small user
77	COR-164	Sulzer Pumps (SA) Limited	Category 1	Service provider
78	COR-165	Uramin Mago Lukisa	Category 1	Mining and Mineral Processing
79	COR-167	Western Uranium (Pty) Ltd	Category 1	Mining and Mineral Processing
80	COR-178	Durban Container Terminal – Business Unit of SA Port Operations	Category 1	Mining and Mineral Processing
81	COR-180	SA Port Operations – Container Terminal Cape Town	Category 1	Mining and Mineral Processing
82	COR-181	Transnet Limited (SA Port Operations – Multipurpose Terminal,Saldanha bay)	Category 1	Mining and Mineral Processing
83	COR-182	Buffelsfontein Gold Mine Limited	Category 5	Mining and Mineral Processing
84	COR-183	Tasman Pacific Minerals (Pty) Limited	Category 1	Mining and Mineral Processing
85	COR-184	HVH Gold (Pty) Limited	Category 2	Mining and Mineral Processing
86	COR-186	AfriSam (Pty) Limited	Category 1	Mining and Mineral Processing
87	COR-190	Sibanye Gold – Ezulwini	Category 4	Mining and Mineral Processing
88	COR-194	Exxaro Resources	Category 1	Mining and Mineral Processing
89	COR-195	Houlgon Uranium & Power (Pty) Ltd	Category 1	Mining and Mineral Processing
90	COR-197	Gold Reef City Theme Park	Category 1	Mining and Mineral Processing
91	COR-198	Set Point Industrial Technologies (Pty) Ltd (Isando)	Category 1	Small user
92	COR-199	Uramin Mago Lukisa	Category 1	Mining and Mineral Processing
93	COR-200	Uramin Mago Lukisa	Category 1	Mining and Mineral Processing
94	COR-201	A&S Mining Supplies	Category 1	Service provider
95	COR-203	Cemo Pumps (Pty) Ltd	Category 1	Service provider
96	COR-204	Holgoun Energy (Pty) Ltd	Category 1	Mining and Mineral Processing
97	COR-206	Uranium One and Micawber 397 (Proprietary) Limited	Category 1	Mining and Mineral Processing
98	COR-210	Tasman Pacific Minerals (Pty) Limited	Category 1	Mining and Mineral Processing
99	COR-215	Margaret Water Company	Category 4	Mining and Mineral Processing
100	COR-216	Paddy's Pad 1183 (Pty) Ltd	Category 1	Mining and Mineral Processing
101	COR-217	Cango Caves Oudtshoorn Municipality	Category 1	Mining and Mineral Processing
102	COR-218	Grindrod Terminals (Pty) Limited	Category 2	Mining and Mineral Processing
103	COR-219	Sibanye Gold Eastern Operations (Pty) Ltd.	Category 4	Mining and Mineral Processing
104	COR-220	African Empowered Aggregates CC	Category 1	Mining and Mineral Processing
105	COR-221	Tasman Pacific Minerals (Pty) Limited	Category 1	Mining and Mineral Processing
106	COR-225	New Kleinfontein Goldmine (Pty) Limited	Category 4	Mining and Mineral Processing

REGULATION OF NUCLEAR ACTIONS

	COR number	Name of COR Holder	Category	Type of COR issued
107	COR-226	Rand Uranium (Pty) Limited	Category 5	Mining and Mineral Processing
108	COR-228	Ergo Mining (Pty) Limited	Category 4	Mining and Mineral Processing
109	COR-230	ALS Chemex South Africa (Pty) Limited	Category 1	Small user
110	COR-232	Central Rand Gold South Africa (Pty) Limited (West)	Category 4	Mining and Mineral Processing
111	COR-233	Central Rand Gold South Africa (Pty) Limited (East)	Category 4	Mining and Mineral Processing
112	COR-236	Reclaim Invest 101 (Pty) Limited	Category 2	Scrap Processor
113	COR-238	Tronox (Namakwa Sands Operations)	Category 4	Mining and Mineral Processing
114	COR-240	Tantus Trading 180 (Pty) Ltd	Category 2	Mining and Mineral Processing
115	COR-242	Enviro Mzingazi Gypsum (Pty) Limited	Category 1	Mining and Mineral Processing
116	COR-245	Namakwa Uranium (Pty) Limited	Category 1	Mining and Mineral Processing
117	COR-246	NTP Logistics (Pty) Limited	Category 2	Mining and Mineral Processing
118	COR-248	Foskor Zirconia (Pty) Limited	Category 2	Mining and Mineral Processing
119	COR-249	Pro Mass Transport (Pty) Ltd	Category 1	Mining and Mineral Processing
120	COR-250	JCI Gold Limited	Category 1	Mining and Mineral Processing
121	COR-252	Harmony Gold Mining Company Limited (South Operations)	Category 4	Mining and Mineral Processing
122	COR-253	Avgold Limited (North Operations)	Category 4	Mining and Mineral Processing
123	COR-256	Chifley Trading CC	Category 1	Service provider
124	COR-257	Samco Investments (Pty) Limited	Category 2	Scrap Processor
125	COR-258	SA Metal and Machinery Co (Pty) Limited	Category 2	Scrap Processor
126	COR-260	African Mineral Standards (a division of Set Point Industrial Technology (Pty) Ltd)	Category 1	Small user
127	COR-261	North West University	Category 1	Mining and Mineral Processing
128	COR-262	UIS Analytical Services (Pty) Ltd	Category 1	Small user
129	COR-263	Aklin Carbide (Pty) Ltd	Category 1	Service provider
130	COR-266	Nicolor	Category 1	Mining and Mineral Processing
131	COR-267	SGS(Randburg Operations)	Category 1	Small user
132	COR-264	Umhlathuze Imports and Exports	Category 2	Scrap Processor
133	COR-270	Trans-Med Shipping	Category 2	Service provider
134	COR-265	Tau Lekoa	Category 4	Mining and Mineral Processing
135	COR-268	Far East Gold	Category 4	Mining and Mineral Processing
136	COR-269	Newshelf 1186	Category 4	Mining and Mineral Processing
137	COR-272	Sasol gas Company	Category 1	Small user
138	COR-273	È&A Belt Sales CC	Category 2	Scrap Processor
139	COR-274	Freight Facilitators (Pty) Ltd	Category 2	Service provider
140	COR-275	Vosloo and Lloyd Investments (Pty) Ltd T/A Scrapcore Secunda	Category 2	Scrap Processor
141	COR-276	Aquatro Investments CC	Category 2	Scrap Processor

REGULATION OF NUCLEAR POWER PLANTS – KOEBERG NUCLEAR POWER STATION (KNPS)

The KNPS is located 35km north of Cape Town on the West Coast of South Africa and is the only nuclear power station on the African continent. KNPS is owned and operated by South Africa's national electricity supplier, Eskom. In terms of the NNR Act, nuclear installation licences contain conditions deemed necessary to ensure the protection of persons, property and the environment against nuclear damage. The current Koeberg Nuclear Installation Licence, NIL-01 variation 18, contains 19 conditions, including specific licensing requirements and controls pertaining to:

- Plant description and configuration
- Scope of activities that may be undertaken
- Safety assessments
- Maintenance and in-service inspections
- Effluent management
- Environmental monitoring
- Transport
- Quality management
- Decommissioning
- Records management and reporting
- Medical surveillance
- Public safety information forums
- Inspection programme to ensure compliance with conditions of authorisation
- Controls and limitations on operation
- Operational radiation protection
- Waste management
- Emergency planning and preparedness
- Physical security
- Acceptance and approval
- Organisational change
- Plant modifications
- Radioactive waste management

In terms of section 26(2) of the NNR Act, Eskom as the nuclear licence holder implements an inspection programme to ensure compliance with the conditions of the Nuclear Installation Licence. The NNR implements an independent system of compliance inspections to provide assurance of compliance with the conditions of the nuclear licence in terms of section 5(d) of the NNR Act.

Occupational exposure to radiation

The NNR prescribes that occupational exposure of any worker should be controlled to ensure that the limits shown in the table below are not exceeded.

General regulatory dose limits

Workforce	Regulatory Criteria (RD-0022)
Maximum individual worker dose	A (maximum) effective dose of 50mSv in any single year
Average individual worker dose	20mSv per annum averaged over five consecutive years

The worker doses at KNPS during the reporting period were within regulatory limits as depicted in figure 1 below. Radiation exposure of workers at KNPS remained subject to control by the Operational Radiation Protection Programme. This programme ensured that control within the annual individual dose limit was achieved. In addition, the programme also served to ensure that all doses are kept As Low As Reasonably Achievable (ALARA).

Figure 1: Highest individual occupational exposure (2013 – 2017)

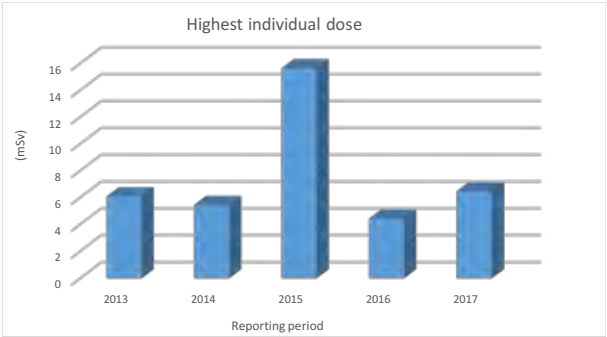
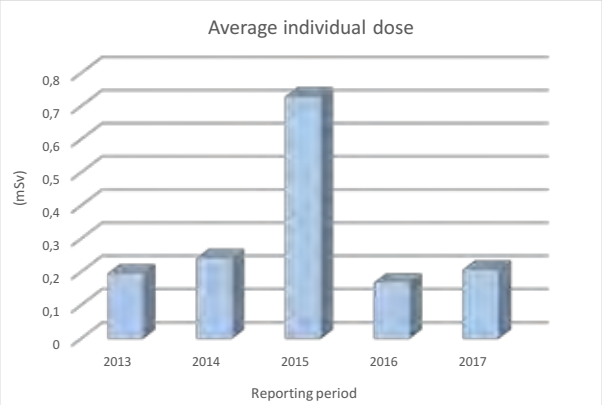


Figure 2: Average individual dose at KNPS (2013 – 2017)



The average individual dose between for 2013 – 2017 was below 20mSv per annum, attesting to the ALARA programme being implemented by the operator. Further, no individual exceeded average individual dose averaged over five consecutive years as prescribed by the SSRP.

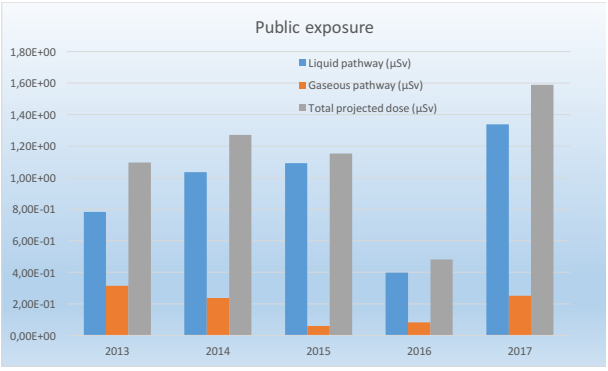
Projected public exposure to radiation

In accordance with the conditions of the licence and the SSRP, the public doses resulting from effluent discharges from KNPS must comply with the dose constraint of 250 µSv/a and the system of annual authorised discharge quantities (AADQs) applicable to the site. KNPS complied with the AADQs and the projected public doses resulting from the effluent releases (both liquid and gaseous) were well within the dose constraint for the 2017 calendar year. There were no unauthorised effluent discharges and no safety concerns regarding the safety of the public living around the site during the period under review.

Dose from effluent discharges during 2017

The projected public dose from effluent discharges for 2013 – 2017 are as shown in figure 3 below.

Figure 3: Projected public dose from effluent discharges (2013 – 2017)



	Liquid pathway dose µSv/a	Gaseous pathway dose in µ Sv/a	Total projected dose µSv/a
2013	7.83E-01	3.14E-01	1.10E+00
2014	1.04E+00	2.37E-01	1.27E+00
2015	1.09E+00	6.00E-02	1.15E+00
2016	3.99E-01	8.31E-02	4.82E-01
2017	1.34E+00	2.513E-01	1.59E+00

The public doses resulting from effluent discharges between 2013 and 2017 were below 250 µSv/a and comply with the dose constraints prescribed by the SSRP regulations.

Nuclear safety

The Authorisation Holder's commitment to safety of the plant and operations have been confirmed by the inspections that have been carried out. Where it has been observed that areas of weakness have occurred, these have been addressed by thorough investigations and the implementation of appropriate corrective actions.

During the year under review, the NNR focused its safety assessment activities primarily on the areas summarised under the headings that follow.

Fukushima accident follow-up

In response to the accident at the Fukushima-Daiichi Nuclear Power Plant, a safety reassessment of KNPS has been performed focusing on external events, both in the design basis and risk analysis domains. The outcome of the external events safety reassessment (EE-SRA) was that KNPS has been adequately designed and is maintained and operated to withstand all of the external events that were considered in the original design basis. Nothing was found to warrant curtailing its operation or to question the integrated design margins inherent in the current facility.

Within the EE-SRA, numerous proposals for plant and resource enhancements were made with the objective of identifying further potential improvements to the robustness of KNPS against extreme external events. The protection strategies adopted address the main safety challenges that occurred at Fukushima-Daiichi Nuclear Power Plant, namely, the loss of cooling capability; electrical power supply; and critical indication that resulted from an external event that was beyond the plant's design basis. The implementation of the strategies provides KNPS with a robust and flexible accident response strategy based on the use of portable equipment. This plug-and-play strategy

adds further defence-in-depth to plant safety, and allows for an accident response strategy that can be utilised under a wide range of events including design extension condition external events. The implementation of the hardened instrumentation strategy will ensure that plant operators will be able to monitor critical plant parameters in order to be able to manage design extension condition events, that is, accidents that are beyond the design basis of the plant, and, through improving the robustness of the incident and accident procedures, Koeberg will realise substantial improvements to nuclear safety in the broad domain of design extension condition events.

These improvements ensure that Koeberg remains aligned with international practice, and implements lessons learned from the accident at Fukushima-Daiichi Nuclear Power Plant.

Most of the short-term actions have been completed, including the procurement of portable equipment with five diesel generators being successfully tested at the supplier. Also, seven new overhead lighting units were delivered to the site. Implementation of modifications are also being progressed within timelines commensurate with safety re-assessments.

Steam Generator Replacement (SGR)

During the year under review, the manufacturing of Replacement Steam Generators (RSGs) planned for installation in 2021 was progressed at various facilities, with most of the components being delivered to Shanghai Electric Nuclear Power Equipment (SENPEC) in China for their final assembly. The NNR appointed the services of an authorised inspection agency (AIA) to monitor, in addition to NNR staff monitoring activities, the manufacturing compliance with NNR requirements, approved specifications, as well as processes at the SENPEC and other sites.

Interfacing between the NNR and Eskom on the project took place through special monthly SGR licensing meetings where outstanding issues are discussed and tracked.

Refuelling water storage tank (PTR) replacement

During the year under review, the NNR continued its oversight of the replacement of the PTR tanks with manufacturing of the Unit 1 tank being completed. The installation of the Unit 1 tank has however been delayed to the 24th refuelling outage (2019) due to NNR concerns with the installation safety case.

Spent fuel dry storage

During the reporting period, NNR reviewed Eskom's submission of the safety justification for the use of the HI-STAR 100 metal casks.

NNR provided comment on the submission which must be resolved before approval will be granted to use the casks as planned.

The HI-STAR 100 metal casks have been certified for use by the United States Nuclear Regulatory Commission (USNRC) and are being used extensively internationally, albeit in a vertical arrangement. Eskom plans to store the casks horizontally in the CSB and will have to demonstrate to the NNR that this arrangement does not adversely impact on safety.

Refuelling Outage 123

Outage 123 on KNPS Unit 1 is a maintenance outage that started on 26 February 2018 and was still in progress by the end of the reporting period. The Unit 1 PTR tank was supposed to be installed during the outage but was removed from the outage scope pending resolution of NNR comments on the installation of the new tank.

Competency and sufficiency of the operator workforce to work safely

Based on monitoring of events on the plant, the overall staffing and competency levels required for acceptable performance in work related to nuclear safety at KNPS were found to be satisfactory during the period under review.

Transport safety

The NNR issued two Nuclear Vessel Licences for the transport of new fuel to KNPS. There were no concerns related to the safety of transport of radioactive material during the period under review.

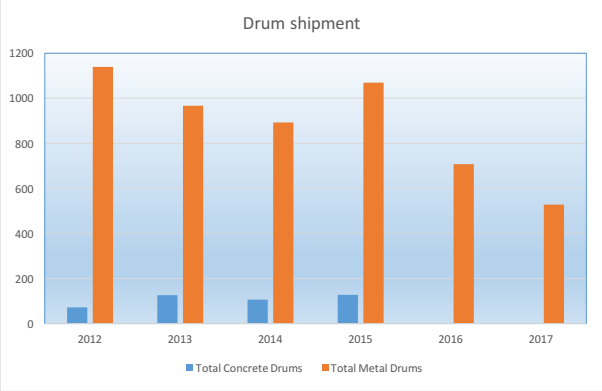
Radioactive waste safety

Eskom submitted safety reports for the shipment and disposal at Vaalputs of standard 210L metal waste packages containing trash for disposal as well as C1 concrete containers that have been reviewed and commented on by the NNR. Significant progress has been made in resolving the outstanding issues and Eskom is in the process of updating the respective safety reports.

Considering the progress made, the hazard associated with the waste packages and the implementation of a graded approach to regulation, the NNR approved the transport to and disposal at Vaalputs of six shipments of the 210L metal drum waste packages containing trash in 2017 subject to conditions.

528 steel drums were sent to Vaalputs during the 2017 calendar year (See figure 4). No concrete containers were transported to Vaalputs.

Figure 4: Inventory of solid radioactive waste produced and drummed for calendar years 2012 – 2017.



Environmental protection

There were no safety concerns identified regarding the environment around KNPS during the period under review.

Nuclear emergency planning and preparedness

The regulatory nuclear emergency exercise was conducted at KNPS on 9 November 2016. The emergency exercise report concluded that the issues identified do not compromise the viability of the emergency plan. The exercise did, however, identify 29 issues for correction or improvement by Eskom and the City of Cape Town. At the time of reporting, 22 non-compliances have been addressed and closed-out.

Physical security

Both the NNR and the national key points' security functionaries have responsibilities regarding physical security at KNPS. As part of its Compliance Assurance Programme, the NNR conducted regular inspections at KNPS to verify conformance to licensing requirements pertaining to physical security. Security related incidents, and Eskom's responses thereto, are being monitored by the NNR and national key points' security functionaries. Where necessary, enforcement actions are called for and implemented. The NNR issued a directive to Eskom pertaining to non-compliance with a condition of the nuclear licence relating to physical security and is monitoring implementation of corrective measures.

The NNR conducted its first nuclear security exercise during the reporting period. The NNR observed that the overall actions taken by KNPS security personnel were in line with the actions identified in their procedures. The facility demonstrated that it had measures in place to prevent, detect and respond to a nuclear security event. However, areas of improvement and non-compliances have been identified and corrective actions are being implemented by Eskom. Implementation of these corrective actions are being monitored by the NNR.

Safety of sealed radioactive sources

The safety of sealed radioactive sources on the KNPS site were found to be in compliance with regulatory requirements. There were no concerns regarding the safety of the sealed radioactive sources during the review period.

Nuclear incidents/accidents reported

There were no nuclear incidents or accidents, as defined in the NNR Act, reported during the period under review. The NNR was satisfied with the processes implemented at KNPS relating to events/occurrences.

Regulatory compliance inspections and audits

In order to verify the degree of compliance with the conditions of authorisation, the NNR undertakes independent inspections and audits. The NNR conducted 67 inspections and two audits at the KNPS as part of its compliance assurance activities in the year under review.

Regulatory warnings and directives to stop work

The NNR issued a directive to KNPS during the reporting period relating to physical security.

Appeals to the CEO

No appeals were lodged with the CEO during the review period.

REGULATION OF NUCLEAR FACILITIES AND ACTIVITIES ON THE SOUTH AFRICAN NUCLEAR ENERGY CORPORATION (NECSA) PELINDABA SITE

Established as a public company in terms of the NEA, the South African Nuclear Energy Corporation (Necsa), with its headquarters at the Pelindaba site, is wholly-owned by the state. The Pelindaba site, comprising 658ha of land and 54ha of buildings and other improvements, is situated in the magisterial district of Madibeng in the North West Province, approximately 25km west of Pretoria, and 55km north-west of Johannesburg. Necsa employs approximately 1 400 people in diverse technical areas such as physics, engineering, chemistry, radiopharmaceuticals and electronics.

Necsa undertakes and promotes research and development (R&D) in the fields of nuclear energy, radiation science and technology, medical-isotope manufacturing, nuclear liabilities management, radioactive waste management, and decommissioning.

In terms of section 26(2) of the Act, Necsa as the nuclear licence holder implements an inspection programme to ensure compliance with the conditions of the Nuclear Installation Licence. The NNR implements an independent system of compliance inspections to provide assurance of compliance with the conditions of the nuclear licence in terms of section 5(d) of the Act.

The nuclear facilities on the Pelindaba site are diverse and include:

- The SAFARI-1 Research Reactor
- Various fuel cycle facilities involved in the manufacture of nuclear fuel for the SAFARI-1 Research Reactor
- Analytical Laboratories
- A Liquid Effluent Treatment Facility
- A variety of radioactive waste treatment and storage facilities
- An array of facilities in various stages of decommissioning.

These facilities are authorised in terms of Nuclear Installation Licences NIL-02 through NIL-27, and NIL-29 through NIL-42. In accordance with the conditions of the licences, Necsa is required to ensure that arrangements, acceptable to the NNR, are established and implemented with respect to the following aspects:

- Plant description and configuration
- Scope of activities that may be undertaken
- Maintenance and in-service inspection
- Effluent management
- Environmental monitoring
- Transport
- Quality management
- Decommissioning
- Records management and reporting
- Medical surveillance
- Public safety information forum
- Financial liability for nuclear damage
- Inspection programme to ensure compliance with conditions of authorisation
- Safety assessment
- Controls and limitations on operation
- Operational radiation protection
- Waste management
- Emergency planning and preparedness
- Physical security
- Acceptance and approval
- Organisational change
- Plant modifications
- Radioactive waste management

REGULATION OF NUCLEAR ACTIONS

Occupational exposure to radiation

The NNR prescribes that occupational exposure of any worker should be controlled to ensure that the limits shown in the table below are not exceeded.

General regulatory dose limits	
Workforce	Regulatory Criteria (RD-0022)
Maximum individual worker dose	A (maximum) effective dose of 50mSv in any single year
Average individual worker dose	20mSv per annum averaged over five consecutive years

Radiation exposure of workers at the Pelindaba site is subject to control by the Operational Radiation Protection Programme. This programme ensures that control within the annual individual dose limit is achieved. In addition, the programme also serves to ensure that all doses are kept ALARA. The occupational exposure on the Pelindaba site was within the NNR regulatory requirements.

Figure 5: The average effective dose Pelindaba site (2013 – 2017)

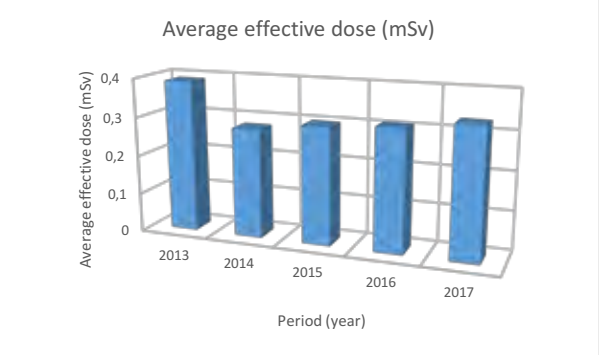
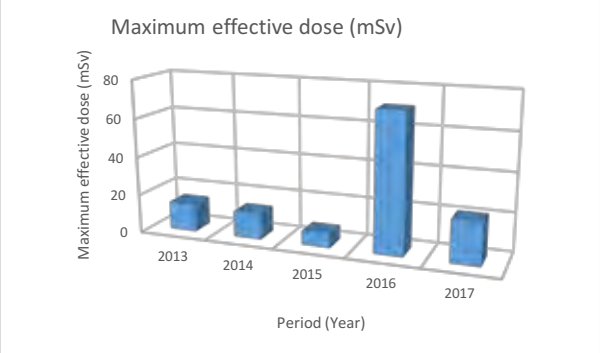


Figure 6: Maximum individual dose Pelindaba site 2013 – 2017

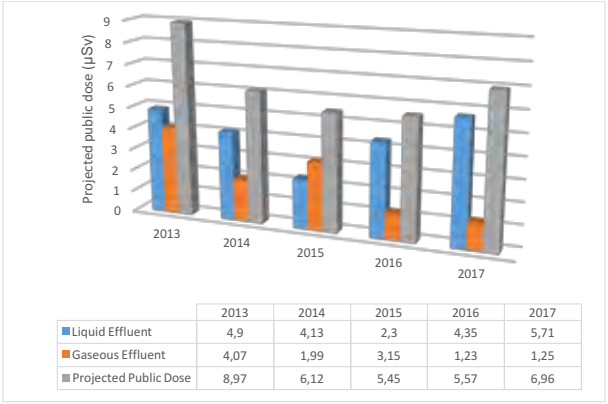


Average effective dose and maximum individual doses received during the past five years are shown in figures 5 and 6 respectively. The reason for the high dose in 2016 was due to an individual who accrued 70.05 mSv while working abroad.

Projected public exposure

Conditions of licence and the SSRP Regulations require that public doses resulting from effluent discharges from the Pelindaba site must comply with the dose constraint of 250 µSv per annum and the system of AADQs applicable to the site. Necsa demonstrated compliance with the AADQs. The projected public doses, resulting from the liquid and gaseous effluent releases during the past five years, is as shown in figure 7.

Figure 7: Projected public exposure of liquid and gaseous pathways for Necsa Pelindaba site 2013 – 2017



	2013	2014	2015	2016	2017
Liquid Effluent	4,9	4,13	2,3	4,35	5,71
Gaseous Effluent	4,07	1,99	3,15	1,23	1,25
Projected Public Dose	8,97	6,12	5,45	5,57	6,96

Nuclear safety

SAFARI-1 ageing management

Noting that the SAFARI-1 Research Reactor was commissioned in 1965, and that the expected operational life extends until 2030, the NNR required Necsa to develop and implement an ageing management strategy. The ageing management strategy proposed by Necsa entailed multiple projects that will span a few years. During the review period, the NNR reviewed Necsa submissions related to:

- Safety classification of SAFARI-1 Structures Systems and Components (SSC's)
- Upgrade of the SAFARI-1 Control Rod Drop Monitoring system
- Upgrade of the SAFARI-1 Gamma Safety Channel System
- Refurbishment of the SAFARI-1 Neutron Control Channel system
- Upgrade of the SAFARI-1 Area Monitoring System

- Replacement of the SAFARI-1 Automatic Flux Controller
- Implementation of portable plug-in power supplies at SAFARI-1

SAFARI-1 alternate fuel plate supplier

SAFARI-1 currently makes use of Low Enriched Uranium (LEU) Fuel Assemblies (FA) and Control Rod Assemblies (CRAs) that are assembled by the ELPROD facility on the Necsa site that makes use of fuel plates and control rod plates that are procured from France. In order to enhance security of fuel supply, Necsa has undertaken to qualify an alternate supplier of fuel plates. To this effect, Necsa has submitted a:

- Licensing strategy
- Qualification programme
- Product specification
- Project management plan

During the review period, the NNR completed its review and sent its comments to Necsa highlighting deficiencies against the NNR safety standards and regulatory practices.

Facility specific Safety Analysis Reports (SAR)

The SAR serves to evaluate the performance of the systems of the facility and to demonstrate its safety, including risks to the workers and the public. The NNR reviewed and responded to Necsa on the SARs, related to the following nuclear facilities on the Pelindaba site:

- The Volume Reduction Facility in Pelstore
- Proposed cylinder store in Area 16
- Refurbishment of Cell 19 in the NTP Radiochemicals Complex (Building P-1701)
- Restoration of Cell 11 in the NTP Radiochemicals Complex (Building P-1701)
- Uranium residue project in the NTP Radiochemicals Complex (Building P-1701)

Review of Operating Technical Specifications (OTS)

The OTS of a nuclear facility set the limits for the facility and outlines the operating envelope for the facility to safely operate within the design limits. The operational limits in an OTS must link the contents of the SAR of the facility with its operation.

The NNR reviewed and commented on the OTS for the following facilities on the Necsa Pelindaba site, during the reporting period:

- Proposed cylinder store in Area 16
- NTP Radiochemicals Complex (Building P-1701)
- Research and Development laboratories in H-Building

Transport safety

There were no concerns related to the safety of transport of radioactive material during the period under review. Transport action undertaken by Necsa during the review period included:

- Transportation of low and intermediate level radioactive waste from the Necsa Pelstore on the Pelindaba site to Vaalputs National Waste Disposal Facility
- Transportation of calibration sources between the Necsa Pelindaba site and the Vaalputs National Radioactive Waste Disposal Facility
- Transportation of radioactive sources from external waste generators to the Pelindaba site for storage
- Transportation to safeguard samples from Pelindaba to the IAEA headquarters in Vienna, Austria

Safety Assessment of the SAFARI-1 Spent Fuel Transfer Cask

In the previous reporting period, the NNR reviewed and responded to the Necsa submission related to update of the safety assessment for the SAFARI-1 Spent Fuel Transfer cask. During this reporting period the NNR completed its review of the Necsa responses and resubmission to the NNR comments and further comments were sent to Necsa.

Validation and Re-Validation of Transport Packages

In accordance with the provisions of section 7 of the National Nuclear Regulator Act, Act 47 of 1999, the NNR acts as the competent authority in South Africa in compliance with the International Atomic Energy Agency's regulations for the safe transport of radioactive material. In line with this mandate, the NNR, during the reporting period, reviewed and re-certified the package design approvals for the following transport containers used by Necsa, as having met the regulatory requirements for Type B(U) packages as described in the International Atomic Energy Agency Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, Vienna, 2012:

Certificate number	Transport package name	Effective date	Expiry date
ZA/NNR/1005/B(U)–96	Beatrice	2 January 2018	2 January 2023
ZA/NNR/1008/B(U)–96	Jane	2 January 2018	2 January 2023

REGULATION OF NUCLEAR ACTIONS

Review of Package Design Approvals

During the review period, the NNR engaged with Necsa on the package design for the C5 NTP Concrete Waste Package. During November 2017 the NNR witnessed the prescribed testing, as per the International Atomic Energy Agency Safety Standards Series No. SSR-6, Regulations for the Safe Transport of Radioactive Material, 2012 Edition, Vienna, 2012. The updated safety documentation addressing the test results is awaited from Necsa.

Radioactive waste safety

There were no safety concerns regarding radioactive waste management on the Pelindaba site during the period under review.

Uranium residue project in the NTP radiochemical complex

As part of radioactive waste management improvement and rationalisation project within the NTP Radiochemical Complex (Hot Cell Complex), Necsa had previously requested approval for modification of the utilisation of Cell 2 in the facility. Necsa proposed to use Cell 2 as an interim store for the storage of uranium residue from the Mo-99 and I-131 radiopharmaceutical manufacture processes

During the reporting period, the NNR granted approval for the hot commissioning of the Cell 2 and monitored the hot commissioning. Hot commissioning will be completed in the next review period.

Volume reduction facility in Pelstore

The NNR granted approval for the hot commissioning of the drum press in the Volume Reduction Facility (VRF) in Pelstore on 23 June 2017. Hot commissioning activities commenced on the 26 June 2017. The hot commissioning was beset by a number of problems and has been extended to the next review period.

Environmental protection

Samples were collected from various media in the environment around the Pelindaba site. The sampling locations were based on the surrounding land use. Samples were analysed and results were submitted to the NNR on a quarterly and annual basis. The sample media included:

- Air filter monitoring on the Pelindaba site
- Milk from surrounding farms
- Plant material in the surrounding area
- Water and fish samples from the Crocodile River and Hartebeespoort Dam

The analyses showed that there were no nuclear safety concerns regarding the environment around the Pelindaba site in the review period.

Regulatory independent verification of radiological environmental enalysis

The NNR conducted an independent verification of radiological environmental analysis by collecting samples in and around the Necsa Pelindaba site. During the review period, there were no discrepancies identified in this process.

Nuclear emergency planning and preparedness

In order to ensure the effectiveness of the Necsa Pelindaba Emergency plan, the NNR conducted a regulatory emergency exercise at the Necsa Pelindaba site on 14 September 2017.

The specific objectives of the regulatory emergency exercise were to test:

(a) Activation of and communication between onsite and offsite emergency response organisations;

(b) Protection of emergency workers, both on-site and off-site;

(c) Physical evacuation of workers including Provision of transport for evacuees;

(d) Activation and operation of the Mass Care Centre (MCC), including required resources;

(e) Arrangements to provide for the evacuees at MCC; and

(f) Arrangements to treat the injured and radiologically contaminated person.

The NNR concluded that the overall response of Necsa and the intervening organisations to the simulated scenario was acceptable and appropriate readiness to respond was demonstrated. Areas of improvement in terms of non-compliances and observations were however identified for correction.

The NNR continues to monitor the Necsa improvement actions and has expressed concern regarding the slow progress with implementation of some corrective actions.

Competency and sufficiency of Necsa's Pelindaba workforce to work safely

In addition to the requirements in the SSRP Regulations, the conditions of licence require that Necsa must establish and implement arrangements to ensure that suitably qualified and experienced persons perform any duties that may affect the safety of operations on the site, or

any duties assigned by or under the conditions of the licence. Such arrangements must make provision for the appointment, as appropriate, of authorised persons to control and supervise operations that may affect plant or facility safety. The regulatory concerns related to the directives issued to NTP Radiochemicals Complex have highlighted that the sufficiency and competency of the staff at the facility requires attention.

Physical security

There were no concerns regarding physical security of the Necsa Pelindaba site during the period under review.

Safety of sealed radioactive sources

There were no safety concerns regarding sealed radioactive sources at Pelindaba site during the review period.

Nuclear incidents/accidents reported

There were no nuclear incidents or accidents reported during the period under review.

Regulatory Compliance Inspections

NNR conducted 138 out of 141 planned and one unplanned compliance inspections at Necsa's Pelindaba site during the 2017/18 financial year. Two inspections were not conducted at NTP due to the facility being out of operation. Additionally one inspection was not conducted at the Y-M Care & Maintenance facility. Overall the inspections revealed satisfactory compliance with NNR regulations except for those inspection related to the NTP facility on the Pelindaba site.

Audits

All five (5) planned audits were conducted during the period under review. Some minor non-compliance matters were raised. Some have already been satisfactorily addressed and the NNR continues to monitor the progress with regard the open issues.

Regulatory investigations

Three investigations were conducted during the reporting period.

i. The NNR conducted an investigation at SAFARI-1 in connection with the failure of the reactor vessel rupture disc, which failed during normal operation on 15 August 2017.
ii. The NNR conducted an investigation at NTP in connection with nuclear occurrence, NIL39-OCC-0160 – possible exceedance of the Operational Technical Specification (OTS) limit for hydrogen in Cell 19.
iii. The NNR conducted an investigation at UMET in connection with nuclear occurrence, NIL09-OCC-0013. Source (Cs) Found in Work Area in UMET.

Nuclear events

Three nuclear events of concern were reported to the NNR and the NNR conducted investigations regarding the two nuclear events during the reporting period.

i. Nuclear occurrence, NIL02-OCC-0076. Failure of Rapture Disc during operation on 15 August 2017.
ii. Nuclear occurrence, NIL39-OCC-0160. Possible Exceedance of Hydrogen Concentration Above 80 % of the LEL during Mo-99 Production at Cell 19.
iii. Nuclear occurrence, NIL09-OCC-0013. Source (Cs) Found in Work Area in UMET.

Regulatory warnings or directives to stop work

Two directives were issued during the reporting period.

- DIR-NTWP-17/18-001 – The NNR directed Necsa to cease production in Cell 19 at NTP Radiochemicals Complex.
- DIR-NTWP-17/18-002 – The NNR directed Necsa to cease production in the whole NTP Radiochemicals Complex.

Following NNR investigation of nuclear occurrence NIL39-OCC-0160, relating to the possible exceedance of the Operational Technical Specification (OTS) limit for hydrogen in Cell 19 on 27 October 2017, the NNR issued directive DIR-NTWP-17/18-0001, on 1 November 2017, which required Necsa to forthwith cease all production activities (dissolution of irradiated uranium target plates) in Cell 19. The NNR directive also highlighted concerns relating to NTP prioritising production to the detriment of safety and repetitive failures to timeously report events to the NNR.

On 17 November 2017, the NNR issued directive DIR-NTWP-17/18-0002, requiring Necsa to cease all production operations in NTP Radiochemicals Complex (Building P1701) and conduct an investigation into the management of safety within the facility. This decision was predicated on the NNR's preliminary investigation findings into the reported possible exceedance of the OTS limit for hydrogen in Cell 19 on 27 October 2017 as well as the findings from the NNR audit of the facility conducted from 16 October to 20 October 2017. The regulatory concerns identified included: a lack of safety culture at the facility,

violation of or failure to follow facility specific procedures, failure on the part of the facility management to take prompt and appropriate action for said violations, NTP prioritising production to the detriment of safety and repetitive failures to timeously report events to the NNR.

In response to the directives and stemming from the various reported events and regulatory concerns, Necsa proposed a number of corrective and preventive actions in various reports. Necsa was required to consolidate all actions in a single plan, which allows for effective review of actions completed and ensures that a holistic approach is taken to address the concerns at the facility.

Noting the progress made in resolving the outstanding regulatory concerns, albeit with the concerns related to delays in closing out some actions, the NNR reaffirmed to Necsa, on 14 February 2018 under cover of NIL39B0901, that a limited number of return to service readiness runs would be considered subject to regular reporting back to the NNR. As at 31 March 2018, a total of 13 return to service readiness runs had been approved (10 in Cell 19 and 3 in Cell 20A). The NNR continues to monitor the implementation and effectiveness of the actions proposed and has required that Necsa submit an updated plan detailing the revised status of all actions.

Appeals to the CEO

There were no appeals concerning the Pelindaba site during the period under review.

REGULATION OF THE VAALPUTS NATIONAL RADIOACTIVE WASTE DISPOSAL FACILITY

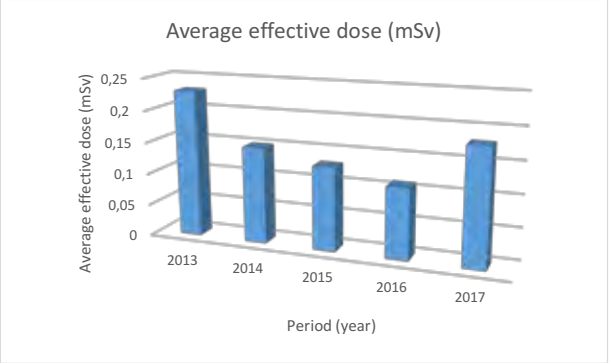
The Vaalputs National Radioactive Waste Disposal Facility is located in the district of Kamiesberg in the Northern Cape Province. The farm, Vaalputs, covers an area of approximately 10 000 ha. The disposal site is situated in the western half and is 99.54 ha (900 m x 1 106 m) in extent, including a 200 m exclusion zone along the perimeter, in which waste disposal is not permitted.

The Vaalputs buildings include the administrative, operational and maintenance areas. The administrative area consists of a reception/display area, offices, a canteen, a conference room, controlled and uncontrolled area change rooms, toilet facilities and a records room. The operational area consists of a laundry, a sample counting room, a waste reception area, a decontamination area, a shielded storage area and a liquid waste solidification area. The maintenance area consists of a mechanical workshop/vehicle service area; store facilities for components, spares, equipment and flammable liquids; a store facility for site maintenance equipment; and utility sections comprising a standby generator, a compressed air facility, a ventilation facility, fire extinguishing pumps, an electrical sub-station and a liquid effluent containment area.

The first revision of the Vaalputs waste acceptance criteria was issued early in 1986 and the first waste shipments from Koeberg were received in November of the same year. Vaalputs is currently authorised for the receipt and shallow land disposal of solid low level radioactive waste (LLW), originating from Koeberg and Necsa.

Occupational exposure to radiation

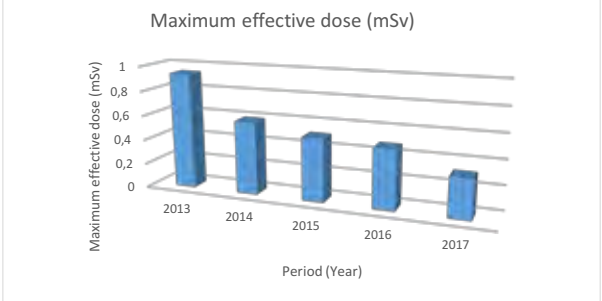
Figure 8: Average effective dose at Vaalputs site (2013 – 2017)



The worker doses at Vaalputs during the past five years were within regulatory limits (figure 8). Radiation exposure of workers at Vaalputs remained subject to control by the Operational Radiation Protection Programme. This programme ensured that control within the annual individual dose limit was achieved. In addition, the programme also served to ensure that all doses are kept ALARA.

The maximum effective doses accrued for an individual during releases during the past five years are depicted in figure 9.

Figure 9: Maximum effective dose at the Vaalputs site (2013 – 2017)



Projected public exposure to radiation

There were no safety concerns regarding public exposure to radiation. In accordance with the conditions of licence and the SSRP Regulations, the public doses resulting from effluent discharges from Vaalputs must comply with the dose constraint of 0.25 mSv. The environmental surveillance programme for Vaalputs has shown no measurable radiological impact on the community living around Vaalputs.

Nuclear safety

During the review period, the NNR reviewed and commented on the following Vaalputs safety case documentation:

- Vaalputs radiological environmental surveillance programme
- Vaalputs procedure for handling of non-conforming waste packages
- Vaalputs meteorological programme
- Vaalputs in-service Inspection and maintenance process

Competency and sufficiency of Necsa's Vaalputs workforce to work safely

In addition to the requirements in the SSRP Regulations, the conditions of licence require that Necsa establish and implement arrangements to ensure that only suitably qualified and experienced persons perform any duties, which may affect the safety of operations on the site, or any duties assigned by or under the conditions of licence. Such arrangements must make provision for the appointment, as appropriate, of authorised persons to control and supervise operations, which may affect plant or facility safety. The NNR was satisfied that Necsa complied with the above requirement during the review period.

Transport safety

There were no concerns related to the safety of transport of radioactive material during the period under review.

Radioactive waste safety

The receiving and disposal of radioactive waste at Vaalputs conformed with the conditions of authorisation and the Vaalputs Waste Acceptance Criteria (WAC). During the reporting period Vaalputs received a total of seventeen radioactive waste shipments, comprising:

- Eleven shipments of concrete waste packages from Necsa; and
- Six shipments of metal waste packages from Koeberg Nuclear Power Station.

Environmental protection

There were no concerns regarding the safety of the environment at Vaalputs during the period under review.

Nuclear emergency planning and preparedness

There were no safety concerns regarding the emergency planning and preparedness at Vaalputs during the period under review.

Physical security

There were no safety concerns regarding the physical security at Vaalputs during the period under review.

Safety of sealed radioactive sources

There were no irregularities regarding sealed radioactive sources at Vaalputs during the period under review.

Nuclear incident/accidents reported

There were no nuclear incidents or accidents reported during the period under review.

Regulatory compliance inspections

During the review period, three (3) inspections and one (1) audit were conducted. All inspections showed acceptable compliance with conditions of authorisation and regulations.

Regulatory warnings or directives to stop work

There were no directives issued to stop work at Vaalputs during the period under review.

Appeals to the CEO or the Board

There were no appeals concerning Vaalputs during the review period.

REGULATION OF NUCLEAR ACTIONS

REGULATION OF NORM

Radionuclides are present in all minerals and raw materials of natural origin, the most important of which, for the purposes of radiation protection, are those in the U238 and Th232 decay series and K40. These materials are commonly referred to as NORM. In some materials, the levels of NORM are significantly higher, to the extent that regulatory control may be required for radiation protection purposes. In terms of the Act the NNR is responsible for exercising regulatory control over facilities and activities handling NORM. Facilities and activities which handle NORM require authorisation in terms of the Act. In terms of section 22 (1) of the Act, such facilities and activities are authorised by means of a nuclear authorisation in a form of certificate of registration (COR) or certificate of exemption (COE). The nuclear authorisation (COR or COE) is issued with certain conditions of authorisation, which all holders are required to comply with. A system of compliance assurance exercises (inspections, audits and investigation actions) are conducted upon these various holders to assure compliance with the conditions of authorisation and the SSRP Regulations.

The NNR currently grants nuclear authorisations for the following categories of NORM:

- Mining and mineral processing facilities
- Scrap smelters
- Fertiliser manufacturers
- Scrap processors
- Small users
- Service providers

The activities at these facilities include actions such as:

- Mining and processing of gold, copper, uranium, heavy minerals and phosphate rock
- Recycling of scrap material (ferrous and non-ferrous metal, plastic, stainless steel, etc.) that is contaminated by NORM
- Small users (i.e. Laboratories conducting tests of small quantities of NORM samples for verification of proposed and existing actions, including samples from prospecting activities)
- Service providers (i.e. storage warehouse, clean-up of radiologically contaminated sites)

Occupational exposure to radiation

The primary radiation exposure pathway to workers in the underground mining environment is via the inhalation of particular radon progeny. The regulatory limits that are applicable for all workers classified as occupational exposed are:

General regulatory dose limits	
Workforce	Regulatory Criteria (SSRP R388)
Maximum individual worker dose	A (maximum) effective dose of 50mSv in any single year
Average individual worker dose	20mSv per annum averaged over five consecutive years

Based on these limits, the NNR requires the authorisation holders to demonstrate that the average effective dose of 20 mSv per year, averaged over five consecutive years, is not exceeded. This requires the holder to have proper dose records of all occupational exposed workers for a rolling five years as determined by the SSRP Regulations.

The NNR continued to focus much of its regulatory efforts on those mines where the potential exists for workers to be exposed to radiation levels in excess of the annual dose limit. During the period under review, no workers exceeded the annual dose limit.

Special case mines

For a mine to be classified as a special case by the NNR, the potential monthly dose rate should be 1.7 mSv and above, or the projected annual dose of 20 mSv is exceeded. During the period under review, the NNR noted a slight improvement attributable to the compliance assurance measures enforced by the NNR in relation to the observed worker doses and efforts by authorisation holders to continuously improve on their systems (see figures 10 and 11).

Figure 10: Total annual (2017) effective dose for special case mines

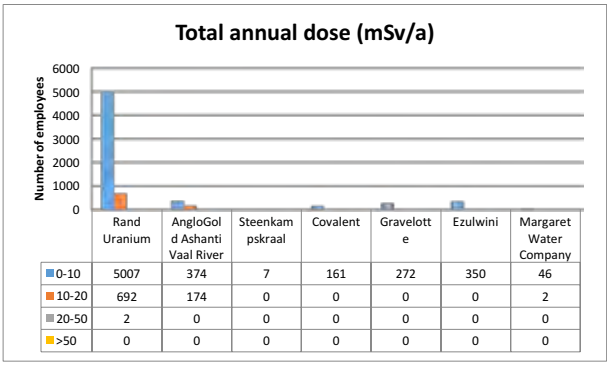
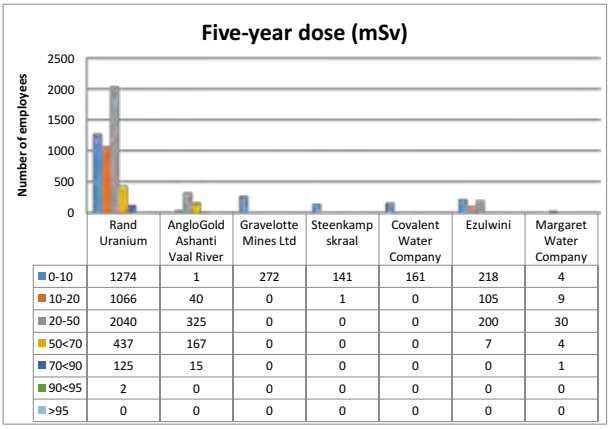


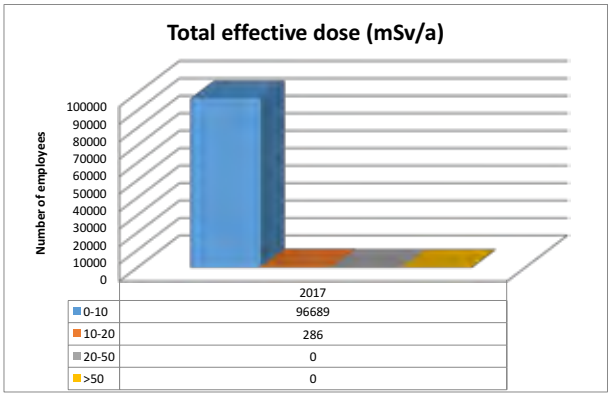
Figure 11: Five-year (2013 – 2017) accumulative dose for special case mines



	Rand Uranium	AngloGold Ashanti Vaal River	Gravelotte Mines Ltd	Steenkamp skraal	Covalent Water Company	Ezulwini	Margaret Water Company
0-10	1274	1	272	141	161	218	4
10-20	1066	40	0	1	0	105	9
20-50	2040	325	0	0	0	200	30
50<70	437	167	0	0	0	7	4
70<90	125	15	0	0	0	0	1
90<95	2	0	0	0	0	0	0
>95	0	0	0	0	0	0	0

Non-special case mines

Figure 12: annual (2017) effective dose for non-special case mines



	2017
0-10	96689
10-20	286
20-50	0
>50	0

Public exposure to radiation

In accordance with the SSRP, the doses for members of the public must comply with the action specific dose constraint of 0.25mSv per annum and a dose limit of 1mSva-1 from all authorised actions. The NNR further required the holders on a five-year frequency to submit the Public Safety Assessments to ensure that the authorised actions did not pose any undue health risks to members of the public and the environment. These reports were reviewed by the NNR and the projected public exposures from these authorised actions were all within the public dose limit of 1mSv.

Transport safety

There were no safety concerns regarding transport of NORM during the period under review. The transportation of NORM and NORM contaminated scrap was carried out in accordance with the requirements of the NNR. Routine transport of surface contaminated objects (SCO-1) scrap materials takes place on a daily basis between authorised facilities. The NNR continued to receive notifications of consignments triggering alarms at gamma drive-through monitors of facilities that are not authorised to handle radioactive materials. The NNR responded to all incidents reported.

Radioactive waste safety

There were no safety concerns related to radioactive waste during the period under review. Authorisation holders were required to manage their radioactive waste and associated waste products. Accordingly, section 1.5 of the COR requires that a waste management procedure be submitted to demonstrate compliance with NNR requirements.

The routine and annual waste management reports submitted to the NNR, demonstrated compliance with the NNR requirements. The summary of waste is presented on table 19.

Table 19: Total waste reported from all holders of operations

Type of waste	Quantities	Units	Number of consignments
Restricted scrap	5.64E+06	Tons	12 869
Unrestricted scrap	1.96E+04	Tons	3997
Gaseous releases	3.34E+11	m^3	n/a
Liquid waste	5.94E+06	m^3	n/a
Semi-solids (tons)	6.14E+07	Tons	n/a
Solids	3.37E+07	Tons	95 744
Other waste	4.69E+05	Tons	5 357

REGULATION OF NUCLEAR ACTIONS

Safety of sealed radioactive sources

There were no sealed radioactive sources regulated by the NNR at holders of certificates of registration. The safety and regulation of radioactive sealed sources falls outside the scope of nuclear facilities and within the jurisdiction of the Directorate of Radiation Control of the Department of Health.

Nuclear incidents, accidents, or occurrences reported

There were 11 registered occurrences during the reporting period. Most of these occurrences were related to accidental/unauthorised release of potentially radioactive material (water and slime material) into the environment.

Seven occurrences were closed and four are in the process of being closed. The NNR will continue to follow-up on these incidents during compliance assurance inspections to ensure that they are closed.

Regulatory compliance

In order to verify the degree of compliance with the conditions of nuclear authorisation, the NNR undertakes independent inspections, investigations, environmental verification, review of compliance reports and audits at authorised facilities.

Inspections

A total of 88 inspections were conducted during the reporting period. These inspections were conducted to verify compliance of the authorised holders with provisions of the NNR Act, Regulations articulated in Safety Standards and Regulatory Practices (R388), NNR Requirements, various NNR approved programmes and procedures implemented by the holders.

Holders were required to investigate the root cause(s) of the non-compliances and implementation of commensurate corrective and preventive actions. The corrective and preventive actions implemented by the authorised holders are confirmed during the NNR compliance inspections.

Audits

A total of 12 audits were conducted at various mining facilities, to verify compliance of the holders with respect to the implementation of quality management systems in fulfilment on the NNR requirements. There were cases where non-compliances were identified and clearly demonstrating weakness and inadequate quality management systems. The mines were required to submit and implement action plans addressing corrective and preventive actions. The NNR will continue to monitor the implementation of the corrective and preventive measures during the compliance assurance activities.

Investigations

The NNR conducted eight regulatory investigations during the reporting period. Most of these investigations were conducted at unauthorised facilities regarding the potential handling of contaminated or radioactive material. Based on the observations made during some of these investigations, it was concluded that no regulatory controls were warranted due to the very low radioactivity levels detected, while in the other cases the detected radioactive material was collected for storage at authorised facilities and others were to apply for a nuclear authorisation. There is an ongoing investigation regarding potential handling of radioactive material without authorisation by two mining companies in Potchefstroom, in the North West Province. There was also a complaint from a Farmer in Welkom area, in the Free State Province regarding radioactive contamination of his property by the authorised mine. The remediation of the farm is ongoing and corrective actions are being implemented to ensure that this incident does not recur.

Environmental Verification Samples

There were 365 environmental samples taken around the holders of authorisation for independent verification purposes. Based on the radioanalysis results, the NNR enforces compliance in the interest of protection of the public and the environment, and to inform future environmental sampling programmes.

Regulatory warnings and directives issued

Regulatory warnings and directives were issued to the following authorisation holders:

Rampete Metal

A directive was issued on 12 July 2017 to Rampete Metal (Pty) Ltd, holder of COR-33, to close-out the recurring non-compliances that were identified during NNR Inspections.

Outcome

The holder has closed out all the recurring non-compliances with an exception of an audit, however, the holder has committed to the timeframes for this non-compliance to be closed.

Gravelotte Mines

On 21 December 2017, a directive was issued to Gravelotte Mines Limited, holder of COR-11, served with intent to reinstate the directive, which called for the discontinuation of authorised actions as a result of recurring non-compliances to the NNR requirements. The directive to discontinue the authorised action was eventually reinstated on 1 March 2018 due to lack of compliance to the NNR requirements.

Outcome

The holder has since demonstrated compliance to the NNR requirements and the compliance status was verified by the NNR during an inspection. The directive was set aside on 23 March 2018 and the NNR will continue to closely monitor compliance of the holder.

Bridge Shipping Company

On 21 December 2017, a directive was issued to Bridge Shipping Company (Pty) Ltd, an unauthorised facility, to barricade the radioactive cobalt ore bags that arrived in August 2017 in the same manner as previously instructed, isolate the consignment from the rest of the material inside the warehouse, restrict access to the warehouse while decision on application of COR was been considered and to provide the outcome of the decision to lodge an application for COR by not later than 15 January 2018.

Outcome

The cobalt ore bags were shipped before the written directive was received and the company was called in for a meeting to make a representation. The company took a decision to lodge an application of COR and enlisted the services of a radiation protection specialist to assist them with the application. Access to the warehouse has been restricted.

Appeals to the CEO

There were no appeals to the CEO regarding the actions or decisions taken by inspectors in terms of section 43 of the NNR Act, 1999 (Act 47 of 1999).

IRRS mission

The Integrated Regulatory Review Service findings relevant to the NNR have been incorporated into the updated NNR Self-Assessment Action Plan. In terms of the action plan implementation, the deliverables for 2017 – 2018 have mostly been achieved. Major milestones achieved in 2017 – 2018 include the development of a facilities plan, update of management manual, procedure for review of safety analysis reports, development of guidance for safety assessment for nuclear facilities, a process to identify gaps and resulting inclusion in regulatory standards or internal documents, and identification of all available mechanisms for compliance activities.

National Dose Register (NDR)

Since the National Dose Register (NDR) Production ("live" system) roll-out, the NNR team has been implementing recommendations from the previous IAEA expert mission in improving the system. The NNR is applying a phased approach in uploading of all relevant occupational exposure records whereby different groupings of data providers are required to upload records in 2018, 2019 and 2020. The NNR has communicated and followed up with data providers on a regular basis regarding the first batch of required uploads. For some data providers, challenges experienced have been being jointly resolved with the NNR team prior to the required upload dates. The NNR has conducted awareness and training sessions in Carletonville and Phalaborwa. During these workshops, data providers are being encouraged to practice uploading occupational dose records on the test NDR, and are assisted to resolve difficulties in uploading records on the test and production NDR.

Upgrade of the RERC

The nineteen radiation monitoring stations have been installed on and around the Koeberg and Pelindaba Nuclear Sites and are being tested by the service provider and the NNR. Agreements with property owners around the two nuclear sites have been concluded.

For the replication of plant data from Koeberg NPS and Necsa facilities, the administrative and technical challenges with the network installation and access to the authorisation holders' servers have progressed, in preparation for the plant data to be replicated to the NNR servers in 2018 – 2019.

REGULATION OF NUCLEAR ACTIONS

Establishment of the NNR verification laboratory

Laboratory

Introduction

The NNR's compliance assurance programme includes independent verification analyses of samples collected around the regulated facilities such as Koeberg Nuclear Power Station, South African Nuclear Energy Corporation (Necsa) and various NORM facilities. The NNR did not have in-house capability to analyse the samples and hence the services of an external service provider, Necsa, have been used as an interim arrangement while the options to re-establish the NNR independent verification capabilities were pursued.

Main services

Independent verification of radiological environmental analysis of samples collected around NNR regulated facilities such as Koeberg Nuclear Power Station, Necsa and the Mining and Minerals Processing facilities.

Status of the laboratory

During the 2016 – 2017 financial year, the laboratory had a capability to analyse 30% of the verification plan. During 2017 – 2018), the laboratory had a capacity to perform 60% of the samples as per the verification plan – an increase of 100% from the previous year.

The laboratory has full capacity to analyse all the samples that require the Gamma Spectrometry and for the Alpha Spectrometry analysis – all uranium samples; validation for radio analysis currently underway before doing routine radio analysis on samples received at the laboratory.

While the accreditation of the Gamma Spectroscopy is underway the laboratory will be analysing 65% of the verification samples. All the procedures pertaining to gamma spectroscopy have been approved and verified.

Laboratory accreditation

The laboratory has started with the process of acquiring SANAS accreditation for its methods/activities as required by ISO 17025 standard. The plan is to have the laboratory fully accredited by 2019 – 2020.

Currently, the laboratory is working on the Gamma Accreditation process, which is to be completed by the end of 2018.

Regulatory framework project

During the reporting period, the NNR updated the proposed draft regulations based on recommendations from the self-assessment that was conducted in preparation of the IRRS Mission.

In 2017 – 2018 the NNR developed and issued regulatory guides on physical protection systems for NORM, conduct of nuclear facilities operators and operator requalification and safety assessment of nuclear facilities. Guidance developed for safety assessment of NORM facilities and activities, control of technical services, site decommissioning and remediation, emergency preparedness and response have been reviewed by stakeholders and will be issued in 2018 – 2019.

The suite of regulations comprises the General Nuclear Safety Regulations, integrating all thematic areas in a coherent and harmonised set of requirements that will be complemented by a series of specific safety regulations. The General Nuclear Safety Regulations will address all radiation exposure situations (existing, planned and emergency), and will apply to all actions, whereas the specific safety regulations (SSR) apply to specific facilities and/or actions.

COMMUNICATION AND STAKEHOLDER RELATIONS

Stakeholder relations

The NNR regards effective stakeholder engagement as a vital process for achieving a favourable outcome on nuclear safety regulatory matters of mutual interest. In order to provide a reliable, sustainable and effective nuclear regulatory framework the NNR creates and maintains inclusive relationships with a variety of stakeholder groups. Effectively engaging stakeholders with diverse experiences, knowledge and perceptions delivers strong outcomes for the NNR, and this extends its success beyond what it can achieve in isolation.

Communication with stakeholders

The principles of regular, relevant, open and factually correct communication with stakeholders is upheld in all targeted or general communications by the NNR in its interaction with its stakeholders. Communication and interaction with stakeholders was an ongoing process during the year under review, and was conducted through various channels based on the needs of the various target audiences.

The NNR's public outreach efforts during the period under review focused on information sharing and public education targeting local communities and learners. The NNR's campaign messages reached over 3 000 learners from all schools targeted.

Public Safety Information Forum (PSIF)

In accordance with the NNR Act, the holder of a Nuclear Installation Licence must establish a Public Safety Information Forum (PSIF), to inform people living in the relevant municipal area in respect of which an emergency plan has been established, in terms of Section 38(1) of the Act on Nuclear Safety and Radiation Safety matters related to the relevant nuclear installation.

In accordance with the provisions of Government Notice No. 299, dated 12 March 2004, and section 26(4) of the NNR Act, Public Safety Information Forums have been established by:

- Eskom for the Koeberg Nuclear Power Station.
- Necsa for Pelindaba and Vaalputs, respectively.

In terms of section 4 of the updated Regulations No. 968 dated 12 September 2008, on the establishment of the Public Safety Information Forum, the Board of the NNR is responsible for appointing chairpersons and deputy chairpersons for the respective Public Safety Information Forums.

During the period under review, NNR officials attended PSIF meetings and made presentations related to nuclear safety and emergency planning as requested. The PSIF Chairpersons and Deputy Chairpersons were duly appointed by the NNR's Board of Directors.

International obligations and cooperation

In order the achieve its vision of being a leading, impartial authority for the regulation of the safe use and handling of nuclear and radioactive material, it is important that the NNR ensures that its regulatory practices are in line or benchmarked against best standards and practices as applied internationally within the nuclear industry and more particularly within the associated nuclear regulatory authorities fraternity. To support the achievement of strengthening regulatory practises, the NNR participates in a number of international meetings, forums and cooperation initiatives.

During the year under review the NNR maintained its international engagements in line with the national nuclear safety obligations. NNR experts participated in the IAEA Safety Standards Committees, as well as several Regulatory Fora and collaboration activities under the IAEA Global Nuclear Safety and Security Networks (GNSSN). The NNR continued to participate in the Multinational Design Evaluation Programme (MDEP) and attended Technical Steering Committee meetings during the year under review.

Bilateral relations

Bilateral agreements with international counterparts provides the NNR with a mechanism for information exchange and technical cooperation to assist the NNR to carry out its mission and increase safety and security levels worldwide.

During the year under review the NNR signed a bilateral cooperation agreement with the National Atomic Energy Agency of the Republic of Poland (PAA) for cooperation and exchange of information in nuclear regulatory matters. In addition, the NNR hosted a fellow from the PAA under the International Atomic Energy Agency's (IAEA) technical cooperation fellowships and scientific visits program as part of a bilateral initiative.

Regional co-operation

The NNR has continued to contribute to the strengthening nuclear and radiation safety regulatory infrastructure throughout the African region through its participation in the FNRBA. The NNR contributed to the development of a FNRBA contribution report which includes the proposed activities and projects addressing the needs of the Forum of Nuclear regulatory Bodies in Africa in line with its strategic action plan to attract the support of potential partners and raise awareness of policy makers in Africa. The NNR continued to coordinate three of the 10 technical working groups of the FNRBA and participated in the second coordination meeting in Vienna, which was attended by IAEA technical officers and donor organisations. For the working groups being coordinated by the NNR, emergency preparedness and response model regulations in English and French have been completed for adoption by FNRBA countries. A survey report on regulatory response to a nuclear or radiological emergency has been

completed and provided to FNRBA countries to address priority areas. NNR employees through the FNRBA working groups also supported the implementation of related IAEA regional projects.

IAEA technical cooperation national projects

As part of the IAEA technical cooperation projects, the IAEA has over the past four years assisted the Regulatory Bodies through human resource development interventions such as fellowships, scientific visits, expert mission and national training courses. The National Nuclear Regulator continued to implement the IAEA technical cooperation national projects SAF9005 and SAF9006 to strengthen regulatory infrastructure, incorporating regulatory issues that should be given high priority into the workplan. In 2017 – 2018 six IAEA expert missions have been conducted to South Africa relating to national dose register development, radiological instrumentation training, ageing lessons learned, remediation framework, review of inspection programme, safety culture programme and integrated management system training. Seven regulatory staff participated in IAEA fellowships on inspections, accident analysis codes and laboratory techniques. A new IAEA technical cooperation project with the aim of implementing a Regulatory Review Improvement Plan (following the conduct of the IRRS Mission) and preparation of regulatory aspects for the Nuclear New Build Programme was approved by the IAEA for commencement in 2018.

CENTRE FOR NUCLEAR SAFETY AND SECURITY (CNSS)

The NNR established the Centre for Nuclear Safety and Security (CNSS) to develop capabilities in order to improve regulatory practices related to nuclear safety and security. In July 2017, the centre signed a memorandum of agreement (MoA) with the University of Pretoria to be a host institution.

As a newly established centre, CNSS embarked on various activities aimed at operationalising the Centre. These activities included the development and conclusion of agreements with strategic partners, recruitment of key staff, refurbishment of CNSS programmer offices and launching of CNSS programmes.

One of the key milestone achievement during the year under review, was the issuing of a call for proposal (CFP) to local partner institutions (LPI) and international partner institutions (IPI). The aim of the CFP was to forge partnerships and/or collaboration with relevant bodies and institutions in the execution of any activities falling within the mandate of the NNR, by:

- Formulating and implementing effective education and training programmes aimed at creating a pipeline of skills, thus increasing the number of nuclear science and engineering professionals with adequate competencies in radiation protection, nuclear safety and nuclear security;
- Facilitating the development and execution of regulatory research and development activities; and
- Providing technical support and/or expert advice or any other service in the fields of nuclear safety and security.

In addition, the CFP was intended to recruit students for Hons/MSc who will embark on identified research projects at various universities.

CNSS Programmes

Education and training

The objective is to develop skills and capacity in nuclear safety and security for the country and the region. During 2017 – 2018, CNSS collaborated with international institutions such as International Atomic Energy Agency (IAEA) and European Nuclear Safety Training and Tutoring Institution (ENSTTI) to deliver regional trainings. CNSS also facilitated the participation of NNR as a member of the Team South Africa Nuclear (TSAN) for training of 18 (eighteen) delegates from Niger.

Collaboration with various institutions resulted in 130 participants across various African countries participating in training sessions facilitated by the CNSS. Out of the 130 participants, 36 were NNR employees. CNSS also supported three NNR employees to attend international training.

CNSS also hosted a fellowship in collaborations with the IAEA. CNSS and NNR Environmental Laboratory hosted three Mongolian delegates. The fellowship program included presentations by various NNR divisions and concluded with practical lessons at the NNR Environmental Laboratory.

As part of capacity building, CNSS advertised the position of research associate and expects to make an appointment during the course of 2018.

Regulatory research and development

The NNR conducts and commissions research and development (R&D) work in support of its regulatory functions in areas such as analytical methods; reviews and assessment; inspection techniques; or in developing new regulations and guides as well as regulatory positions. The CNSS coordinates and project manages safety related research and development initiatives in the NNR that fall outside the scope of routine regulatory activities.

CNSS and the University of Pretoria developed a framework to harmonise the R&D and education and training pillars. The framework formed the basis for call for proposals (CFP) that was issued, aimed at forming collaborations with partner institutions.

The CFP was communicated to (8) eight partner institutions in response to 30 projects in the proficiency areas as shown below.

Area	Total number
Nuclear siting, emergency planning and environmental assessment	10
Nuclear security, radioactive sources and nuclear data	2
Reactor systems and risk analysis	3
Nuclear safety and radiation protection	8
Nuclear systems and structural analysis	7
Total	30

Area	Total number
Nuclear siting, emergency planning and environmental assessment	13
Nuclear security, radioactive sources and nuclear data	2
Reactor systems and risk analysis	4
Nuclear safety and radiation protection	10
Nuclear systems and structural analysis	8
Total	37

Upon conclusion of the assessment stage and subsequent approval process, only four projects were funded in the 2017 – 2018 financial year as shown below.

Institute	Number of students	Area of R&D	Research project
UCT	1 Post Doc 1 MSc	Nuclear Systems and Structural Analysis	Neutron transmission and activation studies for concrete and other materials in the nuclear industry
Wits	2 MSc	Nuclear Siting, Emergency Planning and Environmental Assessment	Independent verification of environmental hydrological conditions of the Thyspunt nuclear site
Wits	2 MSc	Nuclear Safety and Radiation Protection	Assessment of natural radioactivity on drinking water and surroundings of former uranium mines
NCSU	2 MSc	Reactor Systems and Risk Analysis	Multi-physics platform for safety analysis based on NRC codes


Li
Lithium
Be
11
Na
Sodium
19
K
Potassium
37
Rb
Rubidium
55
Cs
Cesium
56
Ba
Barium
Fr
Francium
103
Lr
Me
Me
Me
O
O
OH

6 AUDITED FINANCIAL STATEMENTS

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE NATIONAL NUCLEAR REGULATOR

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS

Opinion

1. I have audited the financial statements of the National Nuclear Regulator (NNR) set out on pages 75 to 109, which comprise the statement of financial position as at 31 March 2018, the statement of financial performance, statement of changes in net assets and cash flow statement and the statement of comparison of budget information with actual information for the year then ended, as well as the notes to the financial statements, including a summary of significant accounting policies.

2. In my opinion, the financial statements present fairly, in all material respects, the financial position of the National Nuclear Regulator as at 31 March 2018, and its financial performance and cash flows for the year then ended in accordance with South African Standards of Generally Recognised Accounting Practice (GRAP) and the requirements of the Public Finance Management Act of South Africa (Act No. 1 of 1999) (PFMA).

Basis for opinion

3. I conducted my audit in accordance with the International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the auditor-general's responsibilities for the audit of the financial statements section of my report.

4. I am independent of the entity in accordance with the International Ethics Standards Board for Accountants' *Code of ethics for professional accountants* (IESBA code) and the ethical requirements that are relevant to my audit in South Africa. I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA code.

5. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Responsibilities of the Accounting Authority for the financial statements

6. The accounting authority is responsible for the preparation and fair presentation of the financial statements in accordance with GRAP and the requirements of section 55(1) of the PFMA, and for such internal control as the accounting authority determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

7. In preparing the financial statements, the accounting authority is responsible for assessing the National Nuclear Regulator's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the accounting authority either intends to liquidate the public entity or to cease operations, or has no realistic alternative but to do so.

Auditor-General's responsibilities for the audit of the financial statements

8. My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

9. A further description of my responsibilities for the audit of the financial statements is included in the annexure to this auditor's report.

REPORT ON THE AUDIT OF THE ANNUAL PERFORMANCE REPORT

Introduction and scope

10. In accordance with the Public Audit Act of South Africa, 2004 (Act No. 25 of 2004) (PAA) and the general notice issued in terms thereof, I have a responsibility to report material findings on the reported performance information against predetermined objectives for selected objectives presented in the annual performance report. I performed procedures to identify findings but not to gather evidence to express assurance.

11. My procedures address the reported performance information, which must be based on the approved performance planning documents of the public entity. I have not evaluated the completeness and appropriateness of the performance indicators/measures included in the planning documents. My procedures also did not extend to any disclosures or assertions relating to planned performance strategies and information in respect of future periods that may be included as part of the reported performance information. Accordingly, my findings do not extend to these matters.

12. I evaluated the usefulness and reliability of the reported performance information in accordance with the criteria developed from the performance management and reporting framework, as defined in the general notice, for the following selected objectives presented in the annual performance report of the public entity for the year ended 31 March 2018:

Programmes	Pages in the annual performance report
Programme 2 – Standard Authorisations Review and Assessment (SARA)	37
Programme 3 – Compliance Assurance and Enforcement (CAE)	37

13. I performed procedures to determine whether the reported performance information was properly presented and whether performance was consistent with the approved performance planning documents. I performed further procedures to determine whether the indicators and related targets were measurable and relevant, and assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.

14. I did not raise any material findings on the usefulness and reliability of the reported performance information for the following objectives:
    - Programme 2 – Standard Authorisations Review and Assessment (SARA)
    - Programme 3 – Compliance Assurance and Enforcement (CAE)

Other matters

15. I draw attention to the matter below.

ACHIEVEMENT OF PLANNED TARGETS

16. Although I identified no material findings on the usefulness and reliability of the reported performance information for the selected programmes, I draw attention to the following matters: Refer to the annual performance report on pages 28 to 33 for information on the achievement of planned targets for the year and explanations provided for the under achievement of a significant number of targets.

REPORT ON THE AUDIT OF COMPLIANCE WITH LEGISLATION

Introduction and scope

17. In accordance with the PAA and the general notice issued in terms thereof, I have a responsibility to report material findings on the compliance of the public entity with specific matters in key legislation. I performed procedures to identify findings but not to gather evidence to express assurance.

18. The material findings on compliance with specific matters in key legislations are as follows:

Procurement and contract management

19. Contracts and quotations were, in some instances, awarded to suppliers whose tax matters had not been declared by the South African Revenue Services to be in order as required by treasury regulations 16A9.1(d).

20. Bid documentation for procurement of commodities designated for local content and production, did not specify the stipulated minimum threshold for local production and content as required by the 2017 Preferential Procurement Regulation 8(2), consequently commodities designated for local content and production, were procured from suppliers who did not submit a declaration on local production and content as required by the 2017 preferential procurement policy regulation.

REPORT OF THE AUDITOR-GENERAL TO PARLIAMENT ON THE NATIONAL NUCLEAR REGULATOR

OTHER INFORMATION

21. The accounting authority is responsible for the other information. The other information comprises the information included in the annual report. The other information does not include the financial statements, the auditor's report and those selected objectives presented in the annual performance report that have been specifically reported in this auditor's report.

22. My opinion on the financial statements and findings on the reported performance information and compliance with legislation do not cover the other information and I do not express an audit opinion or any form of assurance conclusion thereon.

23. In connection with my audit, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements and the selected objectives presented in the annual performance report, or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

24. I did not receive the other information prior to the date of this auditor's report. After I receive and read this information, and if I conclude that there is a material misstatement, I am required to communicate the matter to those charged with governance and request that the other information be corrected. If the other information is not corrected, I may have to retract this auditor's report and re-issue an amended report as appropriate. However, if it is corrected this will not be necessary.

INTERNAL CONTROL DEFICIENCIES

25. I considered internal control relevant to my audit of the financial statements, reported performance information and compliance with applicable legislation; however, my objective was not to express any form of assurance on it. The matters reported below are limited to the significant internal control deficiencies that resulted in the findings on compliance with legislation included in this report.

FINANCIAL AND PERFORMANCE MANAGEMENT

Compliance monitoring

Procurement and contract management

- Management did not regularly monitor compliance with laws and regulation during the procurement process of goods and services as instances of material non-compliance was identified.
- Non-compliance with legislation could have been prevented had compliance been properly reviewed and monitored.

Pretoria

31 July 2018

ANNEXURE – AUDITOR-GENERAL'S RESPONSIBILITY FOR THE AUDIT

1. As part of an audit in accordance with the ISAs, I exercise professional judgement and maintain professional scepticism throughout my audit of the financial statements, and the procedures performed on reported performance information for selected objectives and on the public entity's compliance with respect to the selected subject matters.

Financial statements

2. In addition to my responsibility for the audit of the financial statements as described in this auditor's report, I also:
   - identify and assess the risks of material misstatement of the financial statements whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control
   - obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the public entity's internal control
   - evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by accounting authority
   - conclude on the appropriateness of accounting authority's use of the going concern basis of accounting in the preparation of the financial statements. I also conclude, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the National Nuclear Regulator ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements about the material uncertainty or, if such disclosures are inadequate, to modify the opinion on the financial statements. My conclusions are based on the information available to me at the date of this auditor's report. However, future events or conditions may cause a public entity to cease continuing as a going concern
   - evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation

Communication with those charged with governance

3. I communicate with the accounting authority regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

4. I also confirm to the accounting authority that I have complied with relevant ethical requirements regarding independence, and communicate all relationships and other matters that may reasonably be thought to have a bearing on my independence and, where applicable, related safeguards.

GENERAL INFORMATION

Country of incorporation and domicile	South Africa
Nature of business and principal activities	To provide protection for persons, property and the environment against nuclear damage, through the establishment of safety standards and regulatory practices.
Directors	Dr T Motshudi (Chairperson) Dr P Dube (Deputy Chairperson) Dr M Tyobeka (CEO) Mr J Leaver Mr A Le Roux Ms E Monale Ms B Mokoetle Mrs D Bendeman Mr P Phili Mr KS Kakoma Mr AJ Seekoe
Registered office	Eco Glades Office Park Eco Glades 2, Block 6 Witch Hazel Avenue Highveld Ext 75, Eco Park, Centurion 0046
Business address	Eco Glades Office Park Eco Glades 2, Block G 420 Witch Hazel Avenue Eco Park, Centurion, Highveld Ext 75 0046
Postal address	PO Box 7106 Centurion, Eco Park Highveld Ext 75 Pretoria 0046
Executive Authority	Minister of Energy
Bankers	ABSA Bank
Auditors	Auditor General South Africa (AGSA) Registered Auditors
Secretary	Ms N Kote

STATEMENT OF DIRECTORS' RESPONSIBILITIES AND APPROVAL

The directors are required by the Public Finance Management Act (Act 1 of 1999), to maintain adequate accounting records and are responsible for the content and integrity of the annual financial statements and related financial information included in this report. It is the responsibility of the directors to ensure that the annual financial statements fairly present the state of affairs of the entity as at the end of the financial year and the results of its operations and cash flows for the period then ended. The external auditors are engaged to express an independent opinion on the annual financial statements and were given unrestricted access to all financial records and related data.

The annual financial statements have been prepared in accordance with Standards of Generally Recognised Accounting Practice (GRAP) including any interpretations, guidelines and directives issued by the Accounting Standards Board.

The annual financial statements are based upon appropriate accounting policies consistently applied and supported by reasonable and prudent judgements and estimates.

The directors acknowledge that they are ultimately responsible for the system of internal financial control established by the entity and place considerable importance on maintaining a strong control environment. To enable the directors to meet these responsibilities, the accounting authority sets standards for internal control aimed at reducing the risk of error or deficit in a cost effective manner. The standards include the proper delegation of responsibilities within a clearly defined framework, effective accounting procedures and adequate segregation of duties to ensure an acceptable level of risk. These controls are monitored throughout the entity and all employees are required to maintain the highest ethical standards in ensuring the entity's business is conducted in a manner that in all reasonable circumstances is above reproach. The focus of risk management in the entity is on identifying, assessing, managing and monitoring all known forms of risk across the entity. While operating risk cannot be fully eliminated, the entity endeavours to minimise it by ensuring that appropriate infrastructure, controls, systems and ethical behaviour are applied and managed within predetermined procedures and constraints.

The directors are of the opinion, based on the information and explanations given by management, that the system of internal control provides reasonable assurance that the financial records may be relied on for the preparation of the annual financial statements. However, any system of internal financial control can provide only reasonable, and not absolute, assurance against material misstatement or deficit.

The directors have reviewed the entity's cash flow forecast for the year to 31 March 2019 and, in the light of this review and the current financial position, they are satisfied that the entity has access to adequate resources to continue in operational existence for the foreseeable future.

The entity is significantly dependent on the authorisation holders for continued funding of operations. The annual financial statements are prepared on the basis that the entity is a going concern and that parliament has neither the intention nor the need to liquidate or curtail materially the scale of the entity or to invoke section 19 of the NNR act.

Although the accounting authority is primarily responsible for the financial affairs of the entity, it is supported by the entity's internal auditors.

The external auditors are responsible for independently reviewing and reporting on the entity's annual financial statements. The annual financial statements have been examined by the entity's external auditors and their report is presented on page 70.

The annual financial statements set out on pages 80 to 109, which have been prepared on the going concern basis, were approved by the accounting authority on 31 March 2018 and were signed on its behalf by:

Dr T Motshudi
Chairperson of board

Dr B Tyobeka
Chief Executive Officer

AUDIT AND RISK MANAGEMENT COMMITTEE REPORT

The Audit and Risk Management Committee is pleased to present its report for the financial year ended 31 March 2018.

MEMBERSHIP AND ATTENDANCE

The membership and attendance of the Audit and Risk Management Committee are as reflected in the Corporate Governance Section of the Annual Report. The committee is required to meet at least four times per annum as per its approved terms of reference.

AUDIT AND RISK MANAGEMENT COMMITTEE RESPONSIBILITY

The Audit and Risk Management Committee reports that it has adopted appropriate formal terms of reference in its charter in line with the requirements of sections 51(1) (a)(ii) of the Public Finance Management Act ("PFMA") and Treasury Regulation 27.1. It further reports that it has conducted its affairs in compliance with its charter.

THE QUALITY OF IN-YEAR QUARTERLY REPORTS SUBMITTED IN TERMS OF THE PFMA

The Audit and Risk Management Committee reviewed the in-year quarterly reports submitted by management during the period under review and it is satisfied with the quality of these reports.

THE EFFECTIVENESS OF INTERNAL CONTROLS

In line with the PFMA and the King III Report on Corporate Governance requirements, Internal Audit provides the Audit and Risk Management Committee and management with assurance that the system of internal controls is adequate and effective. This is achieved by means of the risk management process, as well as the identification of corrective actions and suggested enhancements to the controls and processes.

From the various reports of the Internal Audit, the Audit Report on the annual financial statements and the management letter of the Auditor-General South Africa, it was noted that there were no matters reported that indicate any material deficiencies in the system of internal controls or any material deviations therefrom.

Accordingly, the Audit and Risk Management Committee is satisfied that the system of internal controls over the financial reporting for the period under review was transparent, adequate and effective.

INTERNAL AUDIT

The Audit and Risk Management Committee is satisfied that the internal audit function is operating effectively and that it has addressed the risks pertinent to the entity in its audits.

The Audit and Risk Management Committee has met separately with the Internal Audit to ensure that the function is executed effectively and objectively.

EVALUATION OF ANNUAL FINANCIAL STATEMENTS

The Audit and Risk Management Committee has:

- Reviewed and discussed the audited annual financial statements to be included in the annual report with the Auditor-General South Africa and management;
- Reviewed the management letter issued by Auditor-General South Africa and management's response thereto;
- Reviewed changes in accounting policies and practices, where applicable;
- Reviewed the entity's compliance with legal and regulatory provisions; and
- Reviewed significant adjustments resulting from the audit.

The Audit and Risk Management Committee concurs and accepts the report of the Auditor-General South Africa on the audited annual financial statements.

The Audit and Risk Management Committee recommended the approval of the audited annual financial statements by the Board.

AUDITOR-GENERAL SOUTH AFRICA

The Audit and Risk Management Committee has met with the Auditor-General South Africa to ensure that there are no unresolved issues.

Protas Phili CA(SA)
Chairperson of the Audit and Risk Management Committee

31 July 2018

DIRECTORS' REPORT

The directors have pleasure in submitting their report and the annual financial statements of the NNR for the year ended 31 March 2018.

INCORPORATION

The National Nuclear Regulator is listed as a national public entity in Schedule 3 Part A of the Public Finance Management Act, (Act 1 of 1999, as amended). It was established in terms of section 3 of the National Nuclear Regulator Act, (Act No 47 of 1999). It is engaged in activities at the highest professional level to provide for the protection of persons, property and the environment against nuclear damage, through the establishment of safety standards and regulatory practices.

REVIEW OF ACTIVITIES

Main business and operations

The NNR is engaged in activities aimed at protecting persons,property and the environment against nuclear damage in South Africa.

GOING CONCERN

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

SUBSEQUENT EVENTS

The directors are not aware of any significant matter or circumstances affecting financial statements arising since the end of the financial year.

DIRECTORS' INTEREST IN CONTRACTS

All directors have given general declarations of interest in terms of the NNR's Code of Conduct. These declarations indicate the nature of interest a director, spouse, partner or close family member holds in a Company, including any directorship in a company classified as a related party to the NNR. No material contracts in which the directors have an interest were entered into in the current financial year.

ACCOUNTING POLICIES

The annual financial statements are prepared in accordance with the South African Standards of the Generally Recognised Accounting Practice (GRAP), including any interpretations of such statements issued by the Accounting Practices Board, and in accordance with the prescribed Standards of Generally Recognised Accounting Practices (GRAP) issued by the Accounting Standards Board and the National Treasury.

ACCOUNTING AUTHORITY

The directors of the entity during the year and to the date of this report are as follows:

Name	Nationality	Changes
Dr T Motshudi (Chairperson)	South African	Reappointment effective 7 December 2016
Dr P Dube (Deputy Chairperson)	South African	New appointment effective 7 December 2016
Dr M Tyobeka (CEO)	South African	Reappointment effective 1 October 2016
Mr J Leaver	South African	Reappointment effective 7 December 2016
Mr A Le Roux	South African	New appointment effective 7 December 2016
Ms E Monale	South African	New appointment effective 7 December 2016
Ms B Mokoetle	South African	New appointment effective 7 December 2016
Mrs D Bendeman	South African	New appointment effective 7 December 2016
Mr P Phili	South African	New appointment effective 7 December 2016
Mr KS Kakoma	South African	Reappointment effective 1 October 2016
Mr AJ Seekoe	South African	New appointment effective 7 December 2016 (Deceased – November 2017)

SECRETARY

The secretary of the entity is Ms N Kote of:

Business address
Eco Glades Office Park
Eco Glades 2, Block 6
Witch Hazel Avenue
Highveld Ext 75, Eco Park, Centurion
0046

Postal address
PO Box 7106
Centurion, Eco Park
Highveld Ext 75
Pretoria
0046

CORPORATE GOVERNANCE

General

Board of directors meetings

The accounting authority has met as scheduled on four separate occasions during the financial year, see page 16 for details of the annual report for schedule of meetings. Directors have access to all organisational information and executive management necessary to discharge its roles and responsibilities as mandated.

EXECUTIVE AUTHORITY

The entity's controlling entity is the Minister of Energy

BANKERS

ABSA Bank

AUDITORS

Auditor-General South Africa (AGSA) is the permanent auditor of National Nuclear Regulator.

STATEMENT OF FINANCIAL POSITION
AS AT 31 MARCH 2018

Figures in Rand	Note(s)	2018	2017
ASSETS			
Current assets			
Receivables from exchange transactions	7	**33 307 665**	45 059 649
Receivables from non-exchange transactions	8	**79 729**	760 324
Cash and cash equivalents	9	**83 355 831**	59 388 609
		116 743 225	105 208 582
Non-current assets			
Property, plant and equipment	3	**119 207 635**	117 775 819
Intangible assets	4	**98 615**	169 488
		119 306 250	117 945 307
Total assets		**236 049 475**	223 153 889
LIABILITIES			
Current liabilities			
Other financial liabilities	11	**8 199 680**	7 357 093
Operating lease accrual	5	**312 506**	201 456
Payables from exchange transactions	13	**13 522 436**	8 025 813
Other payables from non-exchange transaction		**229 240**	59 956
Provisions	12	**18 099 641**	17 494 777
		40 363 503	33 139 095
Non-current liabilities			
Other financial liabilities	11	**33 602 694**	41 938 799
Employee benefit obligation	6	**10 529 198**	9 361 677
Unspent conditional grants and receipts	10	**13 462 798**	15 408 472
		57 594 690	66 708 948
Total liabilities		**97 958 193**	99 848 043
Net assets		**138 091 282**	123 305 846
Accumulated surplus		**138 091 283**	123 305 844

STATEMENT OF FINANCIAL PERFORMANCE
AS AT 31 MARCH 2018

Figures in Rand	Note(s)	2018	2017
Revenue			
Authorisation fees		**172 548 910**	161 754 990
Application fees		**31 193 815**	11 148 528
Actuarial gain		**–**	762 377
Other income		**697 069**	2 110 223
Deferred income		**1 945 674**	2 856 665
Interest received		**5 769 381**	4 929 853
Government grants	15	**38 573 000**	40 936 000
Total revenue		**250 727 849**	224 498 636
Expenditure			
Compensation of employees	19	**(138 449 187)**	(124 331 201)
Depreciation and amortisation		**(10 443 184)**	(10 467 638)
Finance costs	22	**(4 831 381)**	(5 710 051)
Lease rentals on operating lease		**(2 703 485)**	(2 117 197)
Debt impairment	20	**(2 377 854)**	(2 013 249)
Actuarial losses		**(1 167 521)**	–
Goods and services	17	**(75 969 797)**	(44 730 267)
Total expenditure		**(235 942 409)**	(189 369 603)
Surplus for the year		**14 785 440**	35 129 033

STATEMENT OF CHANGES IN NET ASSETS
FOR THE YEAR ENDED 31 MARCH 2018

Figures in Rand	Accumulated surplus	Total net assets
Balance at 1 April 2016	88 176 811	88 176 811
Changes in net assets		
Surplus/(Deficit) for the year	35 129 033	35 129 033
Total changes	35 129 033	35 129 033
Balance at 1 April 2017	123 305 843	123 305 843
Changes in net assets		
Surplus/(Deficit) for the year	**14 785 440**	**14 785 440**
Total changes	**14 785 440**	**14 785 440**
Balance at 31 March 2018	**138 091 283**	**138 091 283**

CASH FLOW STATEMENT
FOR THE YEAR ENDED 31 MARCH 2018

Figures in Rand	Note(s)	2018	2017
Cash flows from operating activities			
Receipts			
Authorisation fees		**176 836 972**	145 055 626
Government grants		**38 573 000**	40 936 000
Interest income		**5 700 539**	4 790 960
Application fees		**36 547 871**	1 251 399
Other income		**697 069**	1 509 927
		258 355 451	193 543 912
Payments			
Compensation of employees		**(137 749 053)**	(125 662 294)
Goods and services		**(72 510 148)**	(46 411 491)
Finance costs		**(4 831 381)**	(5 710 051)
		(215 090 582)	(177 783 836)
Net cash flows from operating activities	24	**43 264 869**	15 760 076
Cash flows from investing activities			
Purchase of property, plant and equipment	3	**(11 804 129)**	(7 718 074)
Proceeds from sale of property, plant and equipment	3	**–**	227 502
Purchase of other intangible assets	4	**–**	(193 173)
Net cash flows from investing activities		**(11 804 129)**	(7 683 745)
Cash flows from financing activities			
(Decrease)/Increase on other financial liabilities		**(7 493 518)**	(8 167 293)
Net cash flows from financing activities		**(7 493 518)**	(8 167 293)
Net increase/(decrease) in cash and cash equivalents		**23 967 222**	(90 962)
Cash and cash equivalents at the beginning of the year		**59 388 609**	59 479 570
Cash and cash equivalents at the end of the year	9	**83 355 831**	59 388 608

COMPARISON OF BUDGET AND ACTUAL AMOUNTS

FOR THE YEAR ENDED 31 MARCH 2018

Budget on accrual basis

Figures in rand	Approved budget	Adjustments	Final budget	Actual amounts on comparable basis	Difference between final budget and actual	Reference
Statement of financial performance						
Revenue						
Revenue from exchange transactions						
Authorisation fees	170 776 000	–	**170 776 000**	172 548 910	**1 772 910**	Note 34.1
Application fees	23 878 000	–	**23 878 000**	31 193 815	**7 315 815**	Note 34.2
Other income	557 000	–	**557 000**	697 069	**140 069**	
Deferred income	–	–	**–**	1 945 674	**1 945 674**	Note 34.3
Interest received	2 934 000	–	**2 934 000**	5 769 381	**2 835 381**	Note 34.4
Total revenue from exchange transactions	198 145 000	–	**198 145 000**	212 154 849	**14 009 849**	
Revenue from non-exchange transactions						
Transfer revenue						
Government grants	38 573 000	–	**38 573 000**	38 573 000	**–**	
Total revenue	236 718 000	–	**236 718 000**	250 727 849	**14 009 849**	
Expenditure						
Compensation of employees	(138 156 000)	–	**(138 156 000)**	(138 449 187)	**(293 187)**	
Depreciation and amortisation	(15 800 076)	–	**(15 800 076)**	(10 443 184)	**5 356 892**	Note 34.5
Finance costs	(4 086 000)	–	**(4 086 000)**	(4 831 381)	**(745 381)**	
Lease rentals on operating lease	(3 801 924)	–	**(3 801 924)**	(2 703 485)	**1 098 439**	
Debt impairment	–	–	**–**	(2 377 854)	**(2 377 854)**	Note 34.6
Goods and services	(74 874 000)	–	**(74 874 000)**	(75 969 797)	**(1 095 797)**	Note 34.7
Total expenditure	(236 718 000)	–	**(236 718 000)**	(234 774 888)	**1 943 112**	
Operating surplus	–	–	**–**	15 952 961	**15 952 961**	
Actuarial gains/losses	–	–	**–**	(1 167 521)	**(1 167 521)**	
Surplus before taxation	–	–	**–**	14 785 440	**14 785 440**	
Actual amount on comparable basis as presented in the budget and actual comparative statement	–	–	**–**	14 785 440	**14 785 440**	

ACCOUNTING POLICIES
FOR THE YEAR ENDED 31 MARCH 2018

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS

The following are the principal accounting policies of the entity which are, in all material respects, consistent with those of the previous year.

The annual financial statements are prepared under the historical cost basis, except where otherwise specified. The annual financial statements are prepared in accordance with the South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) issued by the Accounting Standard Board, and in the manner required by the Public Finance Management Act, Act No. 1 of 1999. These annual financial statements are presented in South African Rand. Assets and liabilities or income and expenditure will not be offset, unless it is required or permitted by a standard.

1.1 Significant judgements and sources of estimation uncertainty

In preparing the annual financial statements, management is required to make estimates and assumptions that affect the amounts represented in the annual financial statements and related disclosures. Use of available information and the application of judgement is inherent in the formation of estimates. Actual results in the future could differ from these estimates which may be material to the annual financial statements. Significant judgements include:

Post-employment medical benefits

The costs and liabilities of the post-employment medical care benefits are determined using methods relying on actuarial estimates and assumptions. Advice is taken from the independent actuaries relating to the appropriateness of the assumptions. Changes in the assumptions used may have a significant effect on the statement of comprehensive income and statement of financial position.

Provision for impairment of receivables

A provision for impairment of trade receivables is established when there is objective evidence that the NNR will not be able to collect all amounts due according to the original terms of receivables. The calculation of the amount to be provided for impairment of receivables requires the use of estimates and judgments, refer to note 7.

Annual evaluation of property, plant and equipment and intangibles

In order to review property, plant and equipment and intangibles for possible impairment, changes in useful life and changes in residual values at the end of each financial year in accordance with notes 3 and 4, reference is made to historical information and intended use of assets.

The preparation of financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Although these estimates are based on management's best knowledge of current events and actions that the entity may undertake in the future, actual results may ultimately differ from those estimates.

The presentation of the results of operations, financial position and cash flows in the financial statements of the entity is dependent upon and is sensitive to the accounting policies, assumptions and estimates that are used as a basis for the preparation of these financial statements. Management has made certain judgments in the process of applying the entity's accounting policies

1.2 Revenue recognition

Revenue comprises authorisation fees and revenue from special projects. Revenue arising from authorisation fees which are published in the Gazette by the Minister on an annual basis is recognised on an accrual basis in accordance with the substance of the relevant arrangement with the holders of authorisation.

1.3 Government grants

Government grants are recognised in profit and loss when there is reasonable assurance that they will be received and that the entity will comply with the conditions associated with the grants.

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS (continued)

1.4 Property, plant and equipment

Property, plant and equipment is initially measured at cost

The cost of an item of property, plant and equipment is the purchase price and other costs attributable to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Trade discounts and rebates are deducted in arriving at the cost.

Where an asset is acquired through a non-exchange transaction, its cost is its fair value as at date of acquisition.

Where an item of property, plant and equipment is acquired in exchange for a non-monetary asset or monetary assets, or a combination of monetary and non-monetary assets, the asset acquired is initially measured at fair value (the cost). If the acquired item's fair value was not determinable, it's deemed cost is the carrying amount of the asset(s) given up.

When significant components of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Costs include costs incurred initially to acquire or construct an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it. If a replacement cost is recognised in the carrying amount of an item of property, plant and equipment, the carrying amount of the replaced part is derecognised.

The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located is also included in the cost of property, plant and equipment, where the entity is obligated to incur such expenditure, and where the obligation arises as a result of acquiring the asset or using it for purposes other than the production of inventories.

Recognition of costs in the carrying amount of an item of property, plant and equipment ceases when the item is in the location and condition necessary for it to be capable of operating in the manner intended by management.

Items such as spare parts, standby equipment and servicing equipment are recognised when they meet the definition of property, plant and equipment.

Major inspection costs which are a condition of continuing use of an item of property, plant and equipment and which meet the recognition criteria above are included as a replacement in the cost of the item of property, plant and equipment. Any remaining inspection costs from the previous inspection are derecognised.

Property, plant and equipment is carried at cost less accumulated depreciation and any impairment losses.

Property, plant and equipment are depreciated on the straight line basis over their expected useful lives to their estimated residual value.

The useful lives of items of property, plant and equipment have been assessed as follows:

Item	Depreciation method	Average useful life
Land	Straight line	Not depreciated
Buildings	Straight line	20 years
Furniture and fixtures	Straight line	10-25 years
Motor vehicles	Straight line	8 years
Office equipment	Straight line	5-25 years
IT equipment	Straight line	3-5 years
Leasehold improvements	Straight line	Over the lease period
Scientific equipment	Straight line	5-20 years

The residual value, and the useful life and depreciation method of each asset are reviewed at the end of each reporting date. If the expectations differ from previous estimates, the change is accounted for as a change in accounting estimate.

Reviewing the useful life of an asset on an annual basis does not require the entity to amend the previous estimate unless expectations differ from the previous estimate.

Each part of an item of property, plant and equipment with a cost that is significant in relation to the total cost of the item is depreciated separately.

The depreciation charge for each period is recognised in surplus or deficit unless it is included in the carrying amount of another asset.

Items of property, plant and equipment are derecognised when the asset is disposed of or when there are no further economic benefits or service potential expected from the use of the asset.

The gain or loss arising from the derecognition of an item of property, plant and equipment is included in surplus or deficit when the item is derecognised. The gain or loss arising from the derecognition of an item of property, plant and equipment is determined as the difference between the net disposal proceeds, if any, and the carrying amount of the item.

1.5 Intangible assets

An asset is identifiable if it either:

- is separable, i.e. is capable of being separated or divided from an entity and sold, transferred, licensed, rented or exchanged, either individually or together with a related contract, identifiable assets or liability, regardless of whether the entity intends to do so; or
- arises from binding arrangements (including rights from contracts), regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

An intangible asset is recognised when:

- it is probable that the expected future economic benefits or service potential that are attributable to the asset will flow to the entity; and
- the cost or fair value of the asset can be measured reliably.

The entity assesses the probability of expected future economic benefits or service potential using reasonable and supportable assumptions that represent management's best estimate of the set of economic conditions that will exist over the useful life of the asset.

Where an intangible asset is acquired through a non-exchange transaction, its initial cost at the date of acquisition is measured at its fair value as at that date.

Expenditure on research (or on the research phase of an internal project) is recognised as an expense when it is incurred.

An intangible asset is regarded as having an indefinite useful life when, based on all relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows or service potential. Amortisation is not provided for these intangible assets, but they are tested for impairment annually and whenever there is an indication that the asset may be impaired. For all other intangible assets amortisation is provided on a straight line basis over their useful life.

The amortisation period and the amortisation method for intangible assets are reviewed at each reporting date.

Reassessing the useful life of an intangible asset with a finite useful life after it was classified as indefinite is an indicator that the asset may be impaired. As a result the asset is tested for impairment and the remaining carrying amount is amortised over its useful life.

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS (continued)

1.5 Intangible assets (continued)

Internally generated brands, mastheads, publishing titles, customer lists and items similar in substance are not recognised as intangible assets.

Internally generated goodwill is not recognised as an intangible asset.

Amortisation is provided to write down the intangible assets, on a straight line basis, to their residual values as follows:

Item	Useful life
Computer software, other	1-3 years

1.6 Subsequent expenditure

Subsequent expenditure on item of property plant and equipment and intangible assets is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is recognised in the statement of financial performance as an expense when incurred.

1.7 Impairment of non-financial assets

Assets are assessed at the end of each reporting period for any indication that they may impaired. If indication exist, the recovarable amount of the assets is estimated. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount . The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. The NNR assess at each reporting date whether there is any indication that an impairment loss recognised in prior periods for assets may no longer exist or may have decreased. If any such indication exists, the recoverable amounts of those assets are estimated. The increase in carrying amount of assets attributable to a reversal of an impairment loss does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the assets in prior years. A reversal of an impairment loss of assets carried at cost less accumulated depreciation or amortisation is recognised immediately in the statement of financial performance.

1.8 Financial instruments

Recognition and initial measurement

All financial instruments are initially recognised at fair value, plus, in the case of financial assets and liabilities not at fair value through surplus or deficit, transaction costs that are directly attributable to the acquisition or issue. Financial instruments are recognised when the entity becomes a party to their contractual arrangements. All regular way transactions are accounted for on settlement date. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the period generally established by regulation or convention in the market place.

Derecognition .

Financial assets are derecognised when the contractual rights to receive cash flows have been transferred or have expired or when substantially all the risks and rewards of ownership have passed. All other assets are derecognised on disposal or when no future economic benefits are expected from their use.

Financial liabilities are derecognised when the relevant obligation has either been discharged or cancelled or has expired.

Subsequent measurement

Subsequent to initial recognition, the entity classifies financial assets as 'at fair value through surplus or deficit', 'held-to-maturity investments', 'loans and receivables', or 'available-for-sale'.

Gains and losses

Gains or losses arising from changes in financial assets or financial liabilities carried at amortised cost are recognised in statement of financial performance when the financial asset or financial liability is derecognised or impaired, and through the amortisation process.

Financial assets

The NNR classifies its financial assets into one of the categories discussed below, depending on the purpose for which the asset was acquired. The NNR has not classified any of its financial assets as held to maturity, fair value through profit and loss or available for sale.

The accounting policy for each category is as follows:

Loans and receivables

These assets are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They arise principally through the provision of services to licensed holders. They are initially recognised at fair value plus transaction costs that are directly attributable to their acquisition or issue, and are subsequently carried at amortised cost less provision for impairment.

Impairment provisions are recognised when there is objective evidence (such as significant financial difficulties on the part of the counterpart or default or significant delay in payment) that the NNR will be unable to collect all of the amounts due under the terms receivable. Trade receivables, which are reported net of such provisions, are recorded in a separate allowance account with the loss being recognised within operational expenditure in the statement of financial performance. On confirmation that the trade receivable will not be collectable, the gross carrying value of the asset is written off against the associated provision. The loans and receivables comprise trade and other receivables at reporting date.

Cash and cash equivalents.

Cash and cash equivalents comprise cash on hand and other short term highly liquid investments that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. Cash and cash equivalents include cash on hand and deposits held at call.

Financial liabilities

Bank borrowings are initially recognised at fair value net of any transaction costs directly attributable to the issue of the instrument. Such interest-bearing liabilities are subsequently measured at amortised cost using the effective interest rate method, which ensures that any interest expense over the period to repayment is at a constant rate on the balance of the liability carried in the statement of financial position. Trade payables are initially recognised at fair value and subsequently carried at amortised cost using the effective interest method.

1.9 Accounting for leases

A lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership to the lessee. A lease is classified as an operating lease if it does not transfer substantially all the risks and rewards incidental to ownership to the lessee.

Finance leases – lessee

Finance leases are recognised as assets and liabilities in the statement of financial position at amounts equal to the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding liability to the lessor is included in the statement of financial position as a finance lease obligation.

The discount rate used in calculating the present value of the minimum lease payments is the interest rate implicit in the lease. The lease payments are apportioned between the finance charge and reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate on the remaining balance of the liability.

Operating leases – lessee

Operating lease payments are recognised as an expense on a straight-line basis over the lease term. The difference between the amounts recognised as an expense and the contractual payments are recognised as an operating lease liability. This liability is not discounted. Any contingent rents are expensed in the period in which they are incurred.

1. PRESENTATION OF ANNUAL FINANCIAL STATEMENTS (continued)

1.10 Employee benefits

Post-employment benefits

The NNR provides defined pension benefit and medical plan to certain qualifying employees. The entity's net obligation in respect of defined benefits is calculated by estimating the amount of future benefits earned in return for services rendered. The obligation and assets related to each of the post-retirement benefits are determined through an actuarial valuation. The assumptions determined by management make use of information obtained from the entity's employment agreements with staff and pensioners, market related returns on similar investments, and market related discount rates and other available information. The assumptions concerning the expected return on asset and expected change in liabilities are determined on a uniform basis, considering long-term historical returns and future estimates of returns and medical inflation expectations. In the event that further changes in assumptions are required, the future amounts of post-retirement benefits may be affected materially. The post-retirement medical liability is unfunded.

The overall expected rate of return on asset is determined based on the market prices prevailing at that date, applicable to the period over which the obligation is to be settled.

The NNR provides a defined contribution plans for all other employees. The post-retirement medical liability is unfunded.

Defined contribution plans

The entity's funding of the defined contribution plans is charged to employee expenses in the same year as the related service is provided.

Defined benefit plans

The entity provides defined benefit plans for retirement and post-retirement medical aid benefits to qualifying employees. The entity's net obligation in respect of defined benefits is calculated separately for each plan by estimating the amount of future benefits earned in return for services rendered.

The amount recognised in the statement of financial position represents the present value of the defined benefit obligations, calculated by using the projected unit credit method, as adjusted for unrecognised actuarial gains and losses, unrecognised past service costs, if any, and reduced by the fair value of the related plan assets.

The amount of any gain or loss recognised and reflected as expenses is limited to actuarial losses or gain and past service costs plus the present value of available refunds and reductions in future contributions to the plan. To the extent that there is uncertainty as to the entitlement to the surplus, no asset is recognised. No gain is recognised solely as a result of an actuarial loss or past service cost in the current period and no loss is recognised solely as a result of an actuarial gain or past service cost in the current period. The entity recognises actuarial gains and losses for all its defined plans in the period in which they occur.

Past service costs are recognised immediately to the extent that the benefits are vested, otherwise they are recognised on a straight-line basis over the average period the benefits become vested.

Short-term employee benefits

The cost of all short-term employee benefits is recognised during the period in which the employee renders the related service. Provision for employee's entitlement to annual leave represents a present obligation which NNR has to pay as a result of employee's services provided to the reporting date. Annual leave is provided for over the period that the leave accrues.

1.11 Provisions and contingencies

Management judgment is required when recognising and measuring provisions and when measuring contingent liabilities as set out in notes 11 and 25 respectively. The probability that an outflow of economic resources will be required to settle the obligation must be assessed and a reliable estimate must be made of the amount of the obligation.

The entity is required to recognise provisions for claims arising from litigation when the occurrence of the claim is probable and the amount of the loss can be reasonably estimated. Liabilities provided for legal matters require judgments regarding projected outcomes and ranges of losses based on historical experience and recommendations of legal counsel.

Litigation is however unpredictable and actual costs incurred could differ materially from those estimated at the reporting date.

1.12 Going concern assumption

1.13 Related parties

Parties are considered to be related if one party has the ability to control the other party or to exercise significant influence or joint control over the other party in making financial and operating decisions.

1.14 Comparative figures

Comparative figures are restated in the event of a change in accounting policy or prior period error.

1.15 Irregular, fruitless and wasteful expenditure

Irregular expenditure means expenditure incurred in contravention of, or not in accordance with, a requirement of any applicable legislation, including the PFMA. Fruitless and Wasteful expenditure means expenditure that was made in vain and would have been avoided had reasonable care been exercised. All irregular, and fruitless and wasteful expenditure is charged against income in the period in which it is incurred.

1.16 Foreign currencies

Transactions in foreign currencies are accounted for at the rates of exchange ruling on the date of the transactions. Gains and losses arising from the settlement of such transactions are recognised in the income statement.

1.17 Interest received

Interest is recognised on a time proportionate basis taking into account the principal amount outstanding and the effective interest rate.

1.18 Budget information

GRAP 1, Presentation of financial statements, requires entities to provide information on their actual performance against the entity's approved budget. A reconciliation to ensure full compliance with GRAP1 is included as a disclosure note to the financial statements.

2. BASIS OF PREPARATION

The annual financial statements have been prepared in accordance with Standards of Generally Recognised Accounting Practice on a basis consistent with the prior year.

3. NEW STANDARDS AND INTERPRETATIONS

3.1 Standards and Interpretations early adopted

The entity has chosen to early adopt the following standards and interpretations:

Standard/ Interpretation:	Effective date: Years beginning on or after	Expected impact:
IGRAP 18	1 April 2019	The adoption of this amendment has not had a material impact on the results of the company but has resulted in more disclosure than would have previously been provided in the financial statements
GRAP 20: Related parties	1 April 2019	The adoption of this amendment has not had a material impact on the results of the company but has resulted in more disclosure than would have previously been provided in the financial statements

4. PROPERTY, PLANT AND EQUIPMENT

	2018			2017		
	Cost/ valuation	Accumulated depreciation and accumulated impairment	Carrying value	Cost/ valuation	Accumulated depreciation and accumulated impairment	Carrying value
Land	**213 750**	**–**	**213 750**	213 750	–	213 750
Buildings	**122 381 558**	**(34 312 917)**	**88 068 641**	112 773 921	(28 588 661)	84 185 260
Assets under construction	**9 760 754**	**–**	**9 760 754**	10 019 043	–	10 019 043
Furniture and fixtures	**5 347 968**	**(1 744 115)**	**3 603 853**	5 138 198	(1 457 066)	3 681 132
Motor vehicles	**906 438**	**(296 316)**	**610 122**	906 438	(183 011)	723 427
Office equipment	**8 677 818**	**(6 936 320)**	**1 741 498**	8 404 386	(6 383 760)	2 020 626
IT equipment	**16 022 896**	**(11 495 726)**	**4 527 170**	14 249 678	(9 613 572)	4 636 106
Leasehold improvements	**5 343 134**	**(4 203 634)**	**1 139 500**	5 343 134	(3 823 800)	1 519 334
Laboratory equipment	**17 920 828**	**(8 378 481)**	**9 542 347**	17 722 468	(6 945 327)	10 777 141
Total	**186 575 144**	**(67 367 509)**	**119 207 635**	174 771 016	(56 995 197)	117 775 819

Reconciliation of property, plant and equipment – 2018

	Opening balance	Additions	Additions through transfer of functions/ mergers	Depreciation	Total
Land	**213 750**	**–**	**–**	**–**	**213 750**
Buildings	**84 185 260**	**–**	**9 607 637**	**(5 724 256)**	**88 068 641**
Assets under construction	**10 019 043**	**9 349 348**	**(9 607 637)**	**–**	**9 760 754**
Furniture and fixtures	**3 681 132**	**209 770**	**–**	**(287 049)**	**3 603 853**
Motor vehicles	**723 427**	**–**	**–**	**(113 305)**	**610 122**
Office equipment	**2 020 626**	**273 432**	**–**	**(552 560)**	**1 741 498**
IT equipment	**4 636 106**	**1 773 219**	**–**	**(1 882 155)**	**4 527 170**
Leasehold improvements	**1 519 334**	**–**	**–**	**(379 834)**	**1 139 500**
Laboratory equipment	**10 777 141**	**198 360**	**–**	**(1 433 154)**	**9 542 347**
	117 775 819	**11 804 129**	**–**	**(10 372 313)**	**119 207 635**

Reconciliation of property, plant and equipment – 2017

	Opening balance	Additions	Disposals	Depreciation	Total
Land	213 750	–	–	–	213 750
Buildings	89 750 266	–	–	(5 565 006)	84 185 260
Plant and machinery	4 805 767	5 213 276	–	–	10 019 043
Furniture and fixtures	3 947 354	83 975	(64 878)	(285 319)	3 681 132
Motor vehicles	530 122	280 477	(3 747)	(83 425)	723 427
Office equipment	2 811 780	201 252	(217 810)	(774 596)	2 020 626
IT equipment	4 701 046	1 666 668	(86 672)	(1 644 936)	4 636 106
Leasehold improvements	1 899 167	–	–	(379 833)	1 519 334
Laboratory equipment	11 974 701	272 426	–	(1 469 986)	10 777 141
	120 633 953	7 718 074	(373 107)	(10 203 101)	117 775 819

Included in the value of property, plant and equipment are the following properties:

The NNR owns an office building located at Erf 3078 in Highveld, Centurion ,Gauteng (Pledged as a security for ABSA mortgage bond) and land and building located at Erf 3187 in Melkbosch Strand in the Blaauberg Municipality, Western Cape.

5. INTANGIBLE ASSETS

	2018			2017		
	Cost/ valuation	Accumulated amortisation and accumulated impairment	Carrying value	Cost/ valuation	Accumulated amortisation and accumulated impairment	Carrying value
Computer software, other	**3 817 494**	**(3 718 879)**	**98 615**	3 817 494	(3 648 006)	169 488

Reconciliation of intangible assets – 2018

	Opening balance	Amortisation	Total
Computer software, other	**169 488**	**(70 873)**	**98 615**

Reconciliation of intangible assets – 2017

	Opening balance	Additions	Disposals	Amortisation	Total
Computer software, other	547 846	193 173	(306 993)	(264 538)	169 488

6. OPERATING LEASE LIABILITY

Figures in Rand	2018	2007
Current liabilities	**312 506**	201 456

7. EMPLOYEE BENEFIT OBLIGATIONS

The National Nuclear Regulator has retirement employee benefit obligations which consists of:

- Post-retirement pension benefit plan
- Post-retirement medical benefit plan
- Defined pension contribution

The amounts recognised in the statement of financial position are as follows:

Figures in Rand	2018	2017
Carrying value		
Present value of the defined benefit obligation-wholly unfunded	**(10 529 198)**	(9 361 677)
Present value of the defined benefit obligation-partly or wholly funded	**(69 306 000)**	(62 480 000)
Fair value of plan assets	**69 226 000**	68 795 000
Asset not recognised	**80 000**	(6 315 000)
	(10 529 198)	(9 361 677)
The major categories of plan assets as a percentage of total plan assets are as follows:		
South African equities (%)	**70,00**	70,00
Other (state country) equities (%)	**30,00**	30,00
Net expense/(gain) recognised in the statement of financial performance		
Current service cost	**39 450**	90 749
Interest cost	**881 476**	877 047
Actuarial (gains)/losses	**924 093**	(1 156 636)
Expected return on plan assets	**(677 498)**	(573 537)
	1 167 521	(762 377)
Actual return on plan assets		
Expected return on plan assets	**6 682 000**	6 813 000
Actuarial gain/(loss) on plan assets	**(2 207 000)**	(4 286 000)
	4 475 000	2 527 000
Calculation of actuarial gains and losses		
Actuarial (gains)/losses – Obligation	**(4 719 000)**	887 000
Actuarial (gains)/losses – Plan assets	**2 207 000**	4 286 000
	(2 512 000)	5 173 000
Post-retirement pension benefit plan The NNR makes contributions towards post-retirement pension benefits for certain eligible employees.		
Heading		
Opening balance	**62 480 000**	60 882 000
Interest cost	**5 939 000**	5 872 000
Current service cost	**762 000**	845 000
Benefits paid	**(4 594 000)**	(4 232 000)
Actuarial (gain)/losses	**4 719 000**	(887 000)
Closing balance	**69 306 000**	62 480 000
Changes in fair value of plan assets are as follows:		
Opening balance fair value of plan assets	**68 795 000**	69 910 000
Expected return on plan assets	**6 682 000**	6 813 000
Contribution by employer	**378 000**	410 000
Contribution by participants	**172 000**	180 000
Benefits paid	**(4 594 000)**	(4 232 000)
Actuarial gain/(losses)	**(2 207 000)**	(4 286 000)
	69 226 000	68 795 000

Figures in Rand	2018	2017
Key assumptions used		
Assumptions used at the reporting date:		
Discount rates used (%)	**8,90**	9,80
Expected rate of return on assets (%)	**10,00**	10,00
Expected rate of return on reimbursement rights (%)	**6,00**	6,00
Actual return on reimbursement rights (%)	**7,00**	7,00
Funding level (%)	**99,9**	110
Sensitivity analysis		
One percentage point increase		
Effect on defined benefit obligation – Discount rate	**(5 240 000)**	(4 512 000)
Percentage change effect on defined benefit obligation-discount rate	**(8)**	(7)
Effect on defined benefit obligation – Salary inflation	**155 000**	141 000
	PA (90)	PA (90)-2
Effect on defined benefit obligation – Post-retirement mortality	**(2 247 000)**	(1 823 000)
Percentage change effect on defined benefit obligation – Post-retirement mortality	**(3)**	(3)

7.1 Post-retirement medical aid benefit obligation

The NNR has made provision for post-employment medical benefit covering three (3) employees in active employment and seven (7) pensioners. The actuarial valuation was determined by a IAC (Pty) Ltd an independent actuary registered with Actuary Society of South Africa. Valuation has been performed in accordance with GRAP 25.

The NNR makes certain contributions to medical funds in respect of current and retired employees. The NNR has terminated future post-retirement medical aid benefits in respect of employees joining after 31 December 1995.The NNR have an obligation to pay 100% of the membership subscriptions for staff members who had retired from the services of the NNR or then (The Council for Nuclear Safety) on or before 30 July 1990 and also for those staff members retiring from the services of the NNR on or after 1 July 1990, who were in the continuous employment of the NNR before 1 July 1990 to the date of retirement.

The NNR introduced a sliding scale for membership subscriptions for staff joining after 1 July 1990. Subsidy reduced step wise from 100% to a minimum of 60% for employees that joined the NNR after 1 July 1990 and 31 December 1995. Eligible employees must be employed by the NNR until retirement age to qualify for the post-retirement medical aid benefit. The most recent actuarial valuation of the benefit was performed as at 31 March 2018.

Figures in Rand	2018	2017
Changes in present value of the defined benefits are as follows:		
Opening defined benefit obligation	**9 361 677**	10 124 054
Interest cost	**881 476**	877 047
Current service cost	**39 450**	90 749
Benefits paid	**(677 498)**	(573 537)
Actuarial (gain)/losses recognised in statement of financial performance	**924 093**	(1 156 636)
	10 529 198	9 361 677
Actuarial principal assumption used at the reporting date		
Discount rate used (%)	**9**	10
Medical inflation rate (%)	**8**	8
General inflation rate (%)	**6**	7
Post-retirement interest rate (%)	**1**	1
Proportion of continuing membership at retirement (%)	**100**	100
Proportion of retiring members who are married (%)	**30**	30
In service members		
Age of spouse (Husbands: three years older than wives)	**65**	65
Mortality of in-service members	**SA SA85-90 (L)**	SA SA85-90 (L)
Mortality of continuation members post-retirement	**PA (90)-2 years**	**PA (90)-2 years**
Annual rate of withdrawal – from age 55+ (%)	**4,00**	4,00

Figures in Rand	2018	2017
7. EMPLOYEE BENEFIT OBLIGATIONS (continued)		
7.1 Post-retirement medical aid benefit obligation (continued)		
Number of members		
Number of members in active employment	**3**	3
Number of pensioners	**7**	7
	10	10
Average retirement age	**60**	60
The most significant assumptions are those relating to the discount rate and medical inflation. It is the relationship between these assumptions that is important for the purpose of the calculations rather than their absolute values. Assumed healthcare cost trends rates have a significant effect on the amounts recognised in surplus or deficit. A one percentage point change in assumed healthcare cost trends rates would have the following effects:		
Sensitivity analysis		
One percentage point increase		
Effect on the aggregate of the service cost and interest cost	**475 126**	401 000
Effect on defined benefit obligation	**11 004 325**	9 763 000
Effect on the aggregate of the service cost and interest cost-discount rate	**449 277**	(359 000)
Defined benefit obligation discount rate	**10 978 475**	9 003 000
Percentage change effect on defined benefit obligation discount rate	**9**	11

Amounts for the current and previous four years are as follows:

	2018 R	2017 R	2016 R	2015 R	2014 R
Defined benefit obligation	**10 529 198**	9 361 667	10 124 054	10 741 139	12 204 845
Experience adjustments on plan liabilities	**699 802**	(36 395)	(916 549)	2 033 301	580 145

7.3 Defined contribution plan

It is the policy of the entity to provide retirement benefits to all it's employees. A defined contribution pension fund, which is subject to the rules of the fund and to the Pensions Fund Act exists for this purpose.

The entity is under no obligation to cover any unfunded benefits.

Figures in Rand	2018	2017
The amount recognised as an expense for defined contribution plans is	**16 232 235**	14 500 690

8. RECEIVABLES FROM EXCHANGE TRANSACTIONS

Figures in Rand	2018	2017
Trade debtors	**32 340 635**	44 471 005
Staff advance	**114 541**	141 465
Deposits and prepayments	**783 648**	308 286
Other receivables	**68 841**	138 893
	33 307 665	45 059 649

During the year the NNR disbursed R273 262.25 recoverable from AREVA, the amount is paid for providing funding to external bursary holders who intend pursuing careers in nuclear science and engineering.

Trade and other receivables past due but not impaired

Trade and other receivables which are less than a year past due are not considered to be impaired. At 31 March 2018, R32 340 635 (2017: R44 471 005) were past due date but not impaired.

The ageing of amounts past due date but not impaired is as follows:

Figures in Rand	2018	2017
1 month past due	**29 604 955**	29 860 955
2 months past due	**–**	10 610 079
5 months past due	**2 735 681**	33 510
9 months past due	**–**	3 598 549
11 months past due	**–**	367 912

Trade and other receivables impaired

As of 31 March 2018, trade and other receivables of R7 937 676 (2017: R6 044 436) were impaired and provided for.

The ageing of these receivables is as follows:

Figures in Rand	2018	2017
Over 6 months	**7 937 676**	6 044 436
Reconciliation of provision for impairment of trade and other receivables		
Opening balance	**6 044 526**	4 031 277
Provision for impairment	**1 893 240**	2 013 249
	7 937 766	6 044 526

The creation and release of provision for impaired receivables have been included in operating expenses in the surplus or deficit (refer to note 19). Amounts charged to the allowance account are generally written off when there is no expectation of recovering the amount. The NNR's policy is to provide for impairment on receivables which are more than a year outstanding.

9. RECEIVABLES FROM NON-EXCHANGE TRANSACTIONS

Other receivables from non-exchange revenue	**79 729**	760 324

10. CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of:		
Cash on hand	**11 263**	11 263
Bank balances	**30 442 887**	2 509 936
Short-term deposits	**52 901 681**	56 867 410
	83 355 831	59 388 609

Included in the cash balance above is R13.6 million unspent conditional grant relating to establishment of Regulatory Emergency Control Centre and refurbishment of Cape Town office, refer to note 9 for more details.

Figures in Rand	2018	2017

11. UNSPENT CONDITIONAL GRANTS AND RECEIPTS

Unspent conditional grants and receipts comprises of:		
Unspent conditional grants and receipts		
Government grant	**13 462 798**	15 408 472
Movement during the year		
Balance at the beginning of the year	**15 408 472**	18 265 136
Income recognition during the year	**(1 945 674)**	(2 856 664)
	13 462 798	15 408 472

- The refurbishment of Emergency Control Center has been completed and all the equipment necessary for the operation of the centre has been installed but not yet commissioned. The total amount disbursed to date relating to the project amount to R7.5 million.
- The feasibility study for providing adequate office accommodation in Cape Town has been completed and decision has been made to redesign and refurbish the Cape Town office. The total amount disbursed to date relating to the project amount to R2.1 million.

12. OTHER FINANCIAL LIABILITIES

At amortised cost		
Mortgage bond ABSA mortgage bond over head office building, effective 22 June 2012 over the 10 years and final settlement due on 7 June 2022. The loan bears interest at a variable rate of 10% per annum. The loan has a remaining period of 51 months as at 31 March 2018. The loan is currently payable at a monthly instalment of R1 024 591. The loan is secured over head office building with carrying value of R69 million.	**41 802 374**	49 295 892
Non-current liabilities		
At amortised cost	**33 602 694**	41 938 799
Current liabilities		
At amortised cost	**8 199 680**	7 357 093

13. PROVISIONS

Reconciliation of provisions – 2018

	Opening balance	Additions	Utilised during the year	Reversed during the year	Total
Annual Leave	**7 764 954**	**3 061 380**	**(3 685 282)**	**–**	**7 141 052**
Annual performance bonus	**9 729 823**	**10 958 589**	**(9 367 478)**	**(362 345)**	**10 958 589**
	17 494 777	**14 019 969**	**(13 052 760)**	**(362 345)**	**18 099 641**
Reconciliation of provisions – 2017					
Annual Leave	7 422 968	341 986	–	–	7 764 954
Performance Bonus	9 315 056	9 729 823	(5 798 201)	(3 516 855)	9 729 823
	16 738 024	10 071 809	(5 798 201)	(3 516 855)	17 494 777

Provision for annual leave

The leave provision represents management's best estimate of the NNR's liability for leave based on the NNR's approved leave policy. Leave provision represents the amount due to employees for unutilised leave days accrued for services rendered to the NNR as of 31 March 2018. The NNR cannot determine the number of leave days to be utilised or forfeited by its employees during the next financial year with certainty, hence management of the NNR has reasonably estimated the leave provision based on the employee's daily pay-out rate and leave balance which are due to employees as at 31 March 2018.

Performance bonus

Performance bonus represents management's best estimate of bonus payable to qualifying NNR employees who signed the performance agreement with the NNR for financial year ending 31 March 2018. Performance target is set by the board at the beginning of each financial year, employees performance score is linked to overall performance of the NNR. Management has reasonably provided for a bonus in accordance with bonus payment of 2016/17 financial year at an average individual score of 4 achieved during prior year.

Figures in Rand	2018	2017
14. PAYABLES FROM EXCHANGE TRANSACTIONS		
Trade payables	**9 552 341**	6 595 349
Accruals	**2 599 108**	154 746
13th cheque accrual	**1 370 987**	1 275 718
	13 522 436	8 025 813
15. REVENUE		
Authorisation fees	**172 548 910**	161 754 990
Application fees	**31 193 815**	11 148 528
Actuarial gain	**–**	762 377
Other income	**697 069**	2 110 223
Deferred Income	**1 945 674**	2 856 665
Interest received	**5 769 381**	4 929 853
Government grants	**38 573 000**	40 936 000
	250 727 849	224 498 636
The amount included in revenue arising from exchanges of goods or services are as follows:		
Authorisation fees	**172 548 910**	161 754 990
Application fees	**31 193 815**	11 148 528
Actuarial gain	**–**	762 377
Interest received	**5 769 381**	4 929 853
	209 512 106	178 595 748
The amount included in revenue arising from non-exchange transactions is as follows:		
Transfer revenue		
Government grants	**38 573 000**	40 936 000

Figures in Rand	2018	2017
16. GOVERNMENT GRANTS		
Government grant	**38 573 000**	40 936 000
Unconditional		
Conditional grants received	**38 573 000**	40 936 000
Conditional grant		
Balance unspent at beginning of year	**15 408 472**	18 265 137
Conditions met – transferred to revenue	**(1 945 674)**	(2 856 665)
	13 462 798	15 408 472
The NNR has an obligation to establish Regulatory Emergency Control Centre and refurbish Cape Town site office (see note 9) for details.		
17. OTHER INCOME		
Other sundry income	**697 069**	2 170 179
18. GOODS AND SERVICES		
Advertising	**735 463**	674 318
Property rates and municipal charges	**1 995 986**	1 660 712
Auditor's fees	**1 550 981**	1 365 786
Cleaning	**703 727**	682 072
Consulting and professional fees	**26 386 026**	8 148 528
Consumables	**796 627**	1 132 305
Insurance	**660 059**	481 972
Community development and training	**775 656**	328 440
Conferences and seminars	**808 922**	782 327
IT expenses	**4 128 437**	3 173 711
Marketing	**533 751**	116 851
Magazines, books and periodicals	**41 048**	26 918
Medical expenses	**117 192**	131 424
Postage and courier	**432 295**	169 346
Printing and stationery	**1 645 221**	976 662
Security	**2 136 396**	1 712 157
Software expenses	**3 276 285**	2 080 615
Subscriptions and membership fees	**1 730 824**	1 240 815
Telephone and fax	**1 283 945**	1 103 697
Training	**1 296 940**	984 290
Travel – local	**6 130 397**	5 206 084
Travel – overseas	**4 274 247**	2 603 769
Electricity	**1 165 738**	1 286 325
Repairs and maintenance	**2 650 143**	2 601 573
Board fees	**1 039 348**	577 610
Bursaries	**744 000**	433 857
Other expenses	**8 930 143**	5 048 103
	75 969 797	44 730 267

Figures in Rand	2018	2017
19. OPERATING SURPLUS		
Operating surplus for the year is stated after accounting for the following:		
Operating lease charges		
Premises		
• Contractual amounts	**1 962 459**	1 753 009
Equipment		
• Contractual amounts	**720 652**	364 188
Other		
• Contractual amounts	**20 374**	–
	2 703 485	2 117 197
Depreciation on property, plant and equipment	**10 443 184**	10 467 638
Employee costs	**138 449 187**	124 331 201
Defined contribution funds	**15 578 561**	13 969 804
Defined benefit funds	**642 536**	576 859
Loss on sale of assets	**–**	452 599
20. EMPLOYEE RELATED COSTS		
Basic	**68 213 824**	62 359 147
Performance Bonus	**10 958 589**	9 729 823
Medical aid	**5 729 466**	4 788 205
UIF	**513 648**	485 005
Workmen's compensation fund	**153 234**	111 744
SDL	**1 193 496**	1 071 236
PAYE	**35 465 833**	31 239 378
Pension fund-defined benefit plan	**642 536**	576 859
Pension fund-defined contribution plan	**15 578 561**	13 969 804
	138 449 187	124 331 201
21. BAD DEBTS		
Contributions to debt impairment provision	**1 893 240**	2 013 249
Bad debts written off	**484 614**	–
	2 377 854	2 013 249
22. INVESTMENT REVENUE		
Interest revenue		
Short-term deposits	**5 769 381**	4 929 853
23. FINANCE COSTS		
Non-current borrowings	**4 831 381**	5 710 051
24. AUDITORS' FEES		
Fees	**1 550 981**	1 365 786

Figures in Rand	2018	2017
25. CASH GENERATED FROM OPERATIONS		
Surplus	**14 785 440**	35 129 033
Adjustments for:		
Depreciation and amortisation	**10 443 184**	10 467 638
Movements in operating lease assets and accruals	**111 050**	122 872
Movements in post-retirement obligation	**1 167 521**	(762 377)
Movements in provisions	**604 864**	756 753
(Profit)/Loss on assets written off	**–**	452 598
Changes in working capital:		
Receivables from exchange transactions	**11 751 983**	(25 643 082)
Other receivables from non-exchange transactions	**680 595**	(52 295)
Payables from exchange transactions	**5 496 622**	(1 914 356)
Other payable from non-exchange transaction	**169 284**	59 956
Unspent conditional grants and receipts	**(1 945 674)**	(2 856 664)
	43 264 869	15 760 076
26. COMMITMENTS		
Capital commitments		
Approved and contracted for:		
• Property, plant and equipment	**2 170 838**	7 295 166
Total capital commitments		
Already approved and contracted for but not provided for:	**2 170 838**	7 295 166
Operational commitments		
Approved and contracted for:		
• Leases	**11 065 262**	6 251 46
• Other	**20 189 298**	51 136 360
	31 254 560	57 387 829
Total operational commitments		
Already approved and contracted for but not provided for:	**31 254 560**	57 387 829
Total commitments		
Capital commitments	**2 170 838**	7 295 166
Operational commitments	**31 254 560**	57 387 829
	33 425 398	64 682 995
This committed expenditure relates to property,plant and equipment and operational expenditure commitments mainly for technical support organisation that will be financed by available retained cash surpluses and existing cash resources.		
Operating leases – as lessee (expense)		
Minimum lease payments due		
– within one year	**3 778 365**	1 754 891
– in second to fifth year inclusive	**7 286 897**	4 496 578
	11 065 262	6 251 469

27. RELATED PARTIES

Relationships	
Directors	Refer to members' report note
Executive Authority	Minister of Energy
Entities ultimately under common control	National Nuclear Regulator of South Africa (NECSA) National Energy Regulator of SouthAfrica (NERSA) South African National Energy Development Institute (SANEDI) National Radioactive-Waste Disposal Institute (NRWDI) The Petroleum, Oil, Gas Corporation of South Africa (PetroSA) Central Energy Group Fund (CEF) (Pty) Ltd
Post-retirement pension for employees	NNR Pension Fund
Members of key management	Dr M Tyobeka (CEO) Mr D Netshivhazwaulu (CFO) Mr O Phillips (SARA Senior manager) Ms A Simon (CSS Senior manager) Ms D Kgomo (CAE Senior manager)

Related party balances

Amounts included in Trade receivable (Trade Payable) regarding related parties

Figures in Rand	2018	2017
NECSA	**(350 076)**	(336 530)
NECSA	**13 293 238**	12 960 733
Related party transactions		
Services rendered to related party		
NECSA	**45 141 066**	42 922 429
Government transfer		
Department of Energy	**38 573 000**	40 936 000
Services from related party		
NECSA	**(1 057 230)**	(951 361)
Other		
NNR Pension Fund	**16 221 097**	14 546 663

28. EXECUTIVE AND DIRECTORS' EMOLUMENTS

Executive

	Basic salary	Performance bonus	Contributions	Total
2018				
Dr M Tyobeka (CEO)	**2 509 316**	**286 916**	**36 336**	**2 832 568**
Mr D Netshivhazwaulu (CFO)	**1 692 790**	**147 399**	**51 262**	**1 891 451**
Ms A Simon-(CCS Senior Manager)	**1 588 643**	**90 823**	**22 867**	**1 702 333**
Ms D Kgomo (CAE Senior Manager)	**1 681 490**	**146 131**	**48 174**	**1 875 795**
Mr O Phillips (SARA Senior Manager)	**1 733 336**	**161 528**	**100 935**	**1 995 799**
	9 205 575	**832 797**	**259 574**	**10 297 946**
2017				
Dr M Tyobeka (CEO)	2 383 886	146 202	97 533	2 627 621
Mr D Netshivhazwaulu (CFO)	1 615 778	100 146	59 845	1 775 769
Ms A Simon-(CSS Senior Manager)	1 495 235	92 560	41 730	1 629 525
Ms D Kgomo (CAE Senior Manager)	1 579 215	99 284	74 028	1 752 527
Mr O Phillips (SARA Senior Manager)	1 730 163	–	129 845	1 860 008
	8 804 277	438 192	402 981	9 645 450

Performance bonus are provided during the year of actual performance and paid on the subsequent period if so declared in line with NNR approved remuneration and rewards policy.

Directors

	Members' fees	Total
2018		
Mr J Leaver	**184 519**	**184 519**
Dr M T Motshuidi-(Chairperson)	**110 239**	**110 239**
Ms B Mokoetle	**126 259**	**126 259**
Dr P Dube (Deputy Chairperson)	**125 750**	**125 750**
Mr P Phili	**69 455**	**69 455**
Mr A Le Roux	**98 242**	**98 242**
Mr AJ Seekoe	**39 709**	**39 709**
Dr B Sehlapelo	**79 418**	**79 418**
Mr KS Kakoma	**93 609**	**93 609**
	927 200	**927 200**

	Director fees	Total
2017		
Dr T Cohen-(Former Chairperson)	32 893	32 893
Mr T Mofokeng-(Former Deputy Chairperson)	51 145	51 145
Mr N Lesufi	74 646	74 646
Mr S Mimi	52 360	52 360
Dr M Tyobeka (CEO)	82 724	82 724
Mr J Leaver	89 266	89 266
Dr M T Motshidu – (Chairperson)	73 705	73 705
Ms B Mokoetle	19 891	19 891
Dr P Dube (Deputy Chairperson)	19 737	19 737
Mr Phili	18 237	18 237
Mr A Le Roux	15 185	15 185
Mr AJ Seekoe	11 692	11 692
Dr B Sehlapelo (Technical advisor-Until 07-December 2016)	36 127	36 127
	577 608	577 608

Independent Technical Committee Advisor

	Fees	Total
Mr P Fitzsimons*	**16 471**	16 471
Dr ME Makgae*	**21 177**	21 177
	37 648	37 648

* *Mr P Fitzsimons and Dr ME Magkae replaced Dr B Sehlapelo as technical advisors of the Technical Committee effective 24 August 2017 and 15 August 2017 respectively.*

29. RISK MANAGEMENT

Financial risk management

The entity's activities expose it to a variety of financial risks: fair value interest rate risk, cash flow interest rate risk and price risk, credit risk.

The entity's overall risk management program focuses on the unpredictability of liquid cash and seeks to minimise potential adverse effects on the entity's financial performance. Risk management is carried out by executive committee of the NNR under policies approved by the accounting authority. Entity finance division identifies, evaluates and hedges financial risks in close co-operation with the entity's audit and risk management committee. The accounting authority provides written principles for overall risk management, as well as written policies covering specific areas, such as, interest rate risk, credit risk.

29. RISK MANAGEMENT (continued)

Liquidity risk

Prudent liquidity risk management implies maintaining sufficient cash. The NNR's primary source of funding is authorisation fee which are gazetted in terms of section 28 of the National Nuclear Act, 1999, (Act No. 47 of 1999). The NNR maintains liquidity by collecting and paying within 30 days and by limiting capital and operational expenditure within the pre-approved budget. Impairment rate for the year as reported on note 7 was 4,6% (3,7% – 2016/17) against the total authorisation fees recognised on the statement of financial performance. Payables for the year was 5,73% (4,24% – 2016/17) against the total expenditure. The NNR maintained a positive cash balance of R83 355 831 compared to R59 388 608 of the previous financial year.

Credit risk

Credit risk consists mainly of cash deposits, cash equivalents, and trade debtors.

Trade receivables comprises of license and certificate holders by major reputable mining and scrap metal companies. Management evaluate credit risk relating to each license or certificate holder on an ongoing basis and continuously implement a strict collection terms. There is no independent crediting ratings, risk control assesses the credit quality of customers, taking into account financial position, past experience and other factors before a license or certificate can be granted. Impairment rate for the year as reported on note 7 was 4,6% (3,7% – 2016/17) against the total authorisation fees recognised on the statement of financial performance.

Market risk

Interest rate risk

The entity's interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the NNR to cash flow interest rate risk.

The entity analyses its interest rate exposure on a dynamic basis. Various scenarios are simulated taking into consideration refinancing, renewal of existing positions, alternative financing. Based on these scenarios, the entity calculates the impact on surplus or deficit of a defined interest rate shift.

Cash flow interest rate risk

Financial instrument	Current interest rate	Due in less than a year	Due in one to two years	Due in two to three years	Due in three to four years	Due after five years
Bond over property – floating rate	10,00%	12 295 096	12 295 096	12 295 096	12 295 096	3 073 774

Fair value interest rate risk

Price risk

NNR's exposure to price risk is minimal as NNR determines authorisation fees based on cost recovery principle, time spent and effort required for each of the authorisations holders which are gazetted in terms of section 28 of the National Nuclear Act, 1999, (Act No. 47 of 1999)

30. GOING CONCERN

The annual financial statements have been prepared on the basis of accounting policies applicable to a going concern. This basis presumes that funds will be available to finance future operations and that the realisation of assets and settlement of liabilities, contingent obligations and commitments will occur in the ordinary course of business.

The ability of the entity to continue as a going concern is dependent on a number of factors. The most significant of these is that the authorisation holders continue to promptly settle their accounts. The Directors have reviewed the financial performance of the NNR for the current financial year ending 31 March 2018 as well as the budget over MTEF period. In light of this review and the current financial position, they are satisfied that the entity has access to resources to continue in operational existence for the foreseeable future.

31. EVENTS AFTER THE REPORTING DATE

A contingent liability of R68 185, in respect of a grievance lodged by an employee for unfair labour practices was disclosed as at the reporting date. The matter was subsequently dismissed by the CCMA on 2 June 2018. No other material facts or circumstances have arisen between the reporting period and the date when these financial statements are authorised for issue.

32. FRUITLESS AND WASTEFUL EXPENDITURE

Figures in Rand	2018	2017
Add: Fruitless and wasteful expenditure – current year During the year under review, penalty interest was charged on an overdue account due to late payment. Disciplinary process against the implicated employee is underway.	**1 119**	–

33. IRREGULAR EXPENDITURE

Opening balance	**–**	4 683
Add: Irregular Expenditure – current year	**864 899**	–
Less: Amounts condoned	**–**	(4 683)
	864 899	–

Details of irregular expenditure – current year

During the year under review, the National Nuclear Regulator:

33.1 Awarded two quotations to the value of R437 400 without inviting at least the minimum number of written price quotations from prospective suppliers.

33.2 Awarded one (1) quotation with the total value of R36 315 when the bidder did not submit a declaration of local production and content.

33.3 Extended one (1) quotation over the 15% threshold. The total value related to the quotation was R162 839.

33.4 Awarded three (3) quotations to the value of R228 346 to suppliers whose tax matters had not been declared to be in order by the South African Revenue Services.

34. RECONCILIATION BETWEEN BUDGET AND STATEMENT OF FINANCIAL PERFORMANCE

Reconciliation of budget surplus/deficit with the surplus/deficit in the statement of financial performance:

Figures in Rand	2018	2017
Net surplus per the statement of financial performance	**14 785 440**	35 129 033
Adjusted for:		
Loss on assets written-off	**–**	452 599
Provision for doubtful debts	**2 377 854**	2 013 249
Provision for leave pay	**(623 902)**	341 986
Actuarial gain/loss	**1 167 521**	(762 377)
Variance on authorisation fees	**(1 772 910)**	(5 078 990)
Variance on other income	**(7 455 884)**	9 288 820
Variance on other investment income	**(2 835 381)**	(2 135 853)
Variance on compensation	**917 088**	4 928 448
Variance on goods and services	**(2 642)**	(41 800 359)
Variance on depreciation	**(5 356 892)**	551 058
Variance on finance cost	**745 381**	(70 949)
Variance on capital expenditure	**(1 945 673)**	(2 856 665)
Net surplus per approved budget	**–**	–

35. BUDGET DIFFERENCES

Material differences between budget and actual amounts

35.1 Authorisation fees

The authorisation fees for year is R5 million more than the budgeted owing to marginal increase on the number of authorisation holders during the year under review.

35.2 Application fees

A negative variance of R10.9 million on application fees is attributed to delays in some activities on Eskom's Nuclear Installation Site License for Thyspunt site in progress. The project will continue to the next financial year where the bulk of work is expected to be executed.

35.3 Deferred income

Deferred income related to unspent conditional grant received for establishment of Regulator Emergency Control Center and Cape Town office accommodation projects. The total amount disbursed and realised as income during the year is R2.8 million for the period under review.

35.4 Interest received

Interest income is substantially higher than budgeted due to significant cash balance resulting from a cash injection of R24 million in respect of Eskom's Nuclear Installation Site License processing by government which will be recovered form the Regulator in 2018/19 financial year.

35.5 Depreciation and amortisation

Depreciation is budgeted for in line with the CAPEX annual acquisition provision and has increased significantly in line with new assets procured for the Radio Activity Analysis Laboratory commissioned in the past financial year.

35.6 Debt impairment.

The increase in provision for doubtful debts can be attributed to lack of external debt collection service for the better part of the year under review, a panel of legal service providers was however appointed during the third quarter of the financial year and therefore the situation is significantly improving.

35.7 Goods and services

A positive variance 51% on goods and services budget is attributed to delays on Eskom's Nuclear Installation Site License and Koeberg Nuclear Power Station's Steam Generator replacement projects. These two projects' schedules are dependent on the operator's deliverables schedules and therefore the Regulator from time to time revise it's activities to align with the changes thereto.

ACRONYMS, ABBREVIATIONS AND DEFINITIONS

AA	Accounting Authority
ARMCOM	Audit and Risk Management Committee
AADQ	Annual Authorised Discharge Quantity
AFRA	African Regional Cooperative Agreement for Research, Development and Training related to Nuclear Science and Technology
AFS	Annual Financial Statements
ACR	Authorisation Change Request
AGSA	Auditor-General of South Africa
ALARA	As Low As Reasonably Achievable
ARPC	Assistant Radiation Protection Controller
ASDPL	Aerodynamic Separation Process
ASME	American Society of Mechanical Engineers
ASN	French Nuclear Regulatory Authority
CAA	Civil Aviation Authority
CAE	Compliance Assurance and Enforcement
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CNS	Convention on Nuclear Safety
COE	Certificate of Exemption
COM	Chamber of Mines
COR	Certificate of Registration
CPI	Consumer Price Index
CSS	Commission on Safety Standards
DIPR	Dedicated Isotope Production Reactor
DSP	Dosimetry Service Providers
ECC	Emergency Control Centre
EPD	Electronic Personal Dosimeter
DoE	Department of Energy
ENIQ	European Network for Inspection and Qualification
EPSOC	Emergency Planning, Steering and Oversight Committee
FET	Further Education and Training
FNRBA	Forum for Nuclear Regulatory Bodies in Africa
GRAP	Generally Recognised Accounting Practice
HEU	Highly Enriched Uranium
HR	Human Resources
IAEA	International Atomic Energy Agency
ICRP	International Commission on Radiation Protection
ICT	Information Communication Technology
ILT	Initial Licence Training
INES	International Nuclear Event Scale
INPO	Institute of International Nuclear Power Operations
INSAG	International Nuclear Safety Advisory Group
ISI	In-Service Inspection
IT	Information Technology
JCC	Joint Coordinating Committee
KNPS	Koeberg Nuclear Power Station
KPI	Key Performance Indicator
LETF	Liquid-Effluent Treatment Facility
LEU	Low Enriched Uranium
LG	Licensing Guide
LLW	Low-Level Waste
LSA	Low Specific Activity
LTAM	Long-Term Asset Management
MDEP	Multinational Design Evaluation Programme
mSv	Millisievert
MW	Megawatt Electrical
NDR	National Dose Register
Necsa	South African Nuclear Energy Corporation
Nehawu	National Education, Health and Allied Workers' Union
NEPROC	Nuclear Emergency Preparedness Regulatory Oversight Committee
NERS	Network of Regulators of Countries with Small Nuclear Programmes
NGO	Non-Governmental Organisation
NIL	Nuclear Installation Licence
NNR	National Nuclear Regulator
NNRA	National Nuclear Regulator Act

NORM	Naturally Occurring Radioactive Material
NTWP	Nuclear Technology and Waste Projects
NUSSC	Nuclear Safety Standards Committee
NVL	Nuclear Vessel Licence
OTS	Operating Technical Specification
PFMA	Public Finance Management Act
PLEX	Plant Life Extension
PPC	Parliamentary Portfolio Committee
PSA	Public Safety Assessor
PSM	Power Station Manager
QMS	Quality Management System
RAIS	Regulatory Authority Information System
RASIMS	Radiation Safety Information Management System
RASSC	Radiation Safety Standards Committee
RDD	Radiological Dispensive Device
RED	Radiation Emission Device
RPO	Radiation Protection Officer
RTMC	Road Traffic Management Corporation
RSR	Railway Safety Regulator
SALTO	Safety Assessment of Long-Term Operation
SAMSA	South African Maritime Safety Authority
SAPS	South African Police Service
SARA	Standards, Authorisations, Reviews and Assessments
SARS	South African Revenue Service
SAT	Self-Assessment Tool
SCM	Special Case Mines
SGR	Steam Generator Replacement
SHEQ	Safety, Health, Environment and Quality Management
SHEQD	Safety, Health, Environment and Quality Management Department
SSRP	Safety Standards and Regulatory Practices
SQEP	Suitably Qualified and Experienced Person
TPU	Thermal Power Uprate
TRANSSC	Transport Safety Standards Committee
TSO	Technical Support Organisation
UFCOR	Nuclear Fuels Cooperation of South Africa
USNRC	United States Nuclear Regulatory Commission
WAC	Waste Acceptance Criteria
WASSC	Waste Safety Standards Committee
WiNSA	Women in Nuclear South Africa
WiN-NNR	Women in Nuclear National Nuclear Regulator

GLOSSARY OF TERMS

Action: The use, possession, production, storage, enrichment, processing, reprocessing, conveying or disposal, or causing to be conveyed of radioactive material. Any action, the performance of which may result in persons accumulating a radiation dose resulting from exposure to ionising radiation. Any other action involving radioactive material.

Assessment: The process and the result of systematically analysing the hazards associated with sources and actions, and associated protection and safety measures aimed at quantifying performance measures for comparison with criteria.

Becquerel (bq): The unit of radioactivity in nuclear transformations (or disintegrations) per second. Clearance: The removal of radioactive materials or radioactive objects within actions authorised by a nuclear installation licence, nuclear vessel licence, or certificate of registration, from any further control by the Regulator.

Collective dose: An expression of the total radiation dose incurred by a population, defined as the product of the number of individuals exposed to a source and their average radiation dose. The collective dose is expressed in person-sievert (person.sv).

Critical group: A group of members of the public that is reasonably homogeneous with respect to its exposure to a given radiation source and given exposure pathway, and is typical of individuals receiving the highest effective dose or equivalent dose (as applicable) by the given exposure pathway, from the given source.

Decommissioning: Administrative and technical actions taken to allow the removal of all of the regulatory controls from a facility (except for a repository which is closed and not decommissioned).

Defence in-depth: The application of more than a single protective measure for a given radiation or nuclear safety objective, so that the objective is achieved, even if one of the protective measures fails.

Discharge: A planned and controlled release of radioactive nuclides into the environment.

Disposal: The emplacement of radioactive waste in an approved, specified facility without the intention of retrieval. The term "dispose of" has a corresponding meaning.

Disused sealed source: A radioactive source, comprising radioactive material that is permanently sealed in a capsule or closely bonded and in a solid form (excluding reactor fuel elements) that is no longer used and is not intended to be used for the action for which an authorisation had been granted.

Dose: The amount of radiation received, where the use of a more specific term, such as "effective dose" or "equivalent dose" is not necessary for defining the quantity of interest.

Dose constraint: A prospective and source-related restriction on the individual dose arising from the predicted operation of the authorised action, which serves exclusively as a bound on the optimisation of radiation protection and nuclear safety.

Dose limit: The value of the effective dose or equivalent dose to individuals from actions authorised by a nuclear installation licence, nuclear vessel licence or certificate of registration, which must not be exceeded.

Emergency planning: The process of developing and maintaining the capability to take action that will reduce the impact of an emergency on persons, property or the environment. The capability to promptly take action that will effectively reduce the impact of an emergency on persons, property or the environment.

Emergency response: The performance of action to reduce the impact of an emergency on persons, property or the environment.

Environmental monitoring: The measurement of external dose rates, due to sources in the environment, and of radioactive nuclide concentrations in environmental media.

Exposure: The act or condition of being subjected to radiation.

Exposure pathways: A route by which radioactive material can reach or irradiate humans

WCA: Wonderfonteinspruit Catchment Area

Inspector: The person appointed as such in terms of Section 41(1) of the NNR Act.

Minister: The Minister of Energy.

Monitoring: The continuous or periodic measurement of radiological and other parameters, or the determination of the status of a system.

Nuclear accident: Any event or succession of events having the same origin and resulting in an unintended/ exposure to radiation or the release of radioactive material, which is capable of giving rise to an effective dose in excess of 1msv to the public on-site within a year, or in excess of 50msv to a worker on-site, essentially received at the time of the event.

Nuclear authorisation: A nuclear installation licence, nuclear vessel licence, certificate of registration or certificate of exemption.

Nuclear damage: Any injury to or the death or any sickness or disease of a person; or other damage, including any damage to or any loss of use of property or damage to the environment, which arises out of, or from, or is attributable to, the ionising radiation associated with a nuclear installation, nuclear vessel or action.

Nuclear incident: Any unintended event that is reasonably capable of giving rise to an effective dose equal to, or in excess of 0.1msv to the public on-site received essentially at the time of the event, or the unintended spread of radioactive contamination or exposure to radiation, which could reasonably give rise to an effective dose in excess of 20msv to a worker on-site, received essentially at the time of the event, or significant failure of safety provisions.

Nuclear installation: A facility, installation, plant or structure, designed or adapted for, or which may involve the conducting of any process, other than the mining and processing of ore within the nuclear fuel cycle involving radioactive material, including, but not limited to:

- A uranium or thorium refinement or conversion facility;
- A uranium enrichment facility; A nuclear fuel fabrication facility;
- A nuclear reactor, including a nuclear session reactor or any other facility intended to create nuclear fusion;
- A spent nuclear fuel reprocessing facility;
- A spent nuclear fuel storage facility;
- An enriched uranium processing and storage facility; and
- A facility specifically designed to handle, treat, condition, temporarily store or permanently dispose of any radioactive material that is intended to be disposed of as waste material; or
- Any facility, installation, plant or structure declared to be a nuclear installation, in terms of section 2(3) of the NNR Act.

Nuclear safety: The achievement of safe operating conditions, the prevention of nuclear accidents or the limiting of nuclear accident consequences resulting in the protection of workers, the public and the environment against the potential harmful effects of ionising radiation or radioactive material. Radiation protection of people from the effects of exposure to ionising radiation, and the means of achieving this.

Radiation protection monitor: A person, technically competent in radiation protection matters relevant to a given type of action, who is designated by the holder of a nuclear authorisation to perform radiation measurements.

Radiation protection officer: A person, technically competent in radiation protection matters relevant for a given type of who is designated by the holder of a nuclear authorisation to oversee the application of relevant requirements.

Radiation protection specialist: A person trained in radiation protection and other areas of specialisation necessary to be able to assess radiological conditions, to limit radiological consequences or to control doses.

Radioactive material: Any substance consisting of or containing any radioactive nuclide whether natural or artificial, including, but not limited to, radioactive waste and spent nuclear fuel.

Radioactive nuclide: Any unstable atomic nucleus, which decays spontaneously with the accompanying emission of ionising radiation.

Radioactive waste: Any material, whatever its physical form, remaining from an action requiring a nuclear installation licence, nuclear vessel, licence or certificate of registration and for which no further use is foreseen, and that contains or is contaminated with radioactive material and does not comply with the requirements for clearance. The quantitative or qualitative criteria specified by the operator and approved by the regulator, for radioactive waste to be accepted by the operator of a repository for disposal, or by the operator of a storage facility for storage.

Risk: (Qualitatively expressed), the probability of a specified health effect occurring in a person or a group of persons, as a result of exposure to radiation or (quantitatively expressed), a multi-attribute quantity expressing hazard, danger or chance of harmful or injurious consequences associated with actual or potential exposure relating to quantities, such as the probability that specific deleterious consequences may arise, as well as the magnitude and character of such consequences.

Safety assessment: An analysis to evaluate the performance of an overall system and its impact, where the performance measure is radiological impact or some other global measure of impact on safety.

Safety case: A collection of arguments and evidence in support of the safety of a facility or action. This normally includes the findings of a safety assessment and a statement of confidence in these findings.

NOTES

NOTES

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