



ANNUAL REPORT | 2015/16

ANNUAL REPORT 2015-2016

This Annual Report 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 National Nuclear Regulator (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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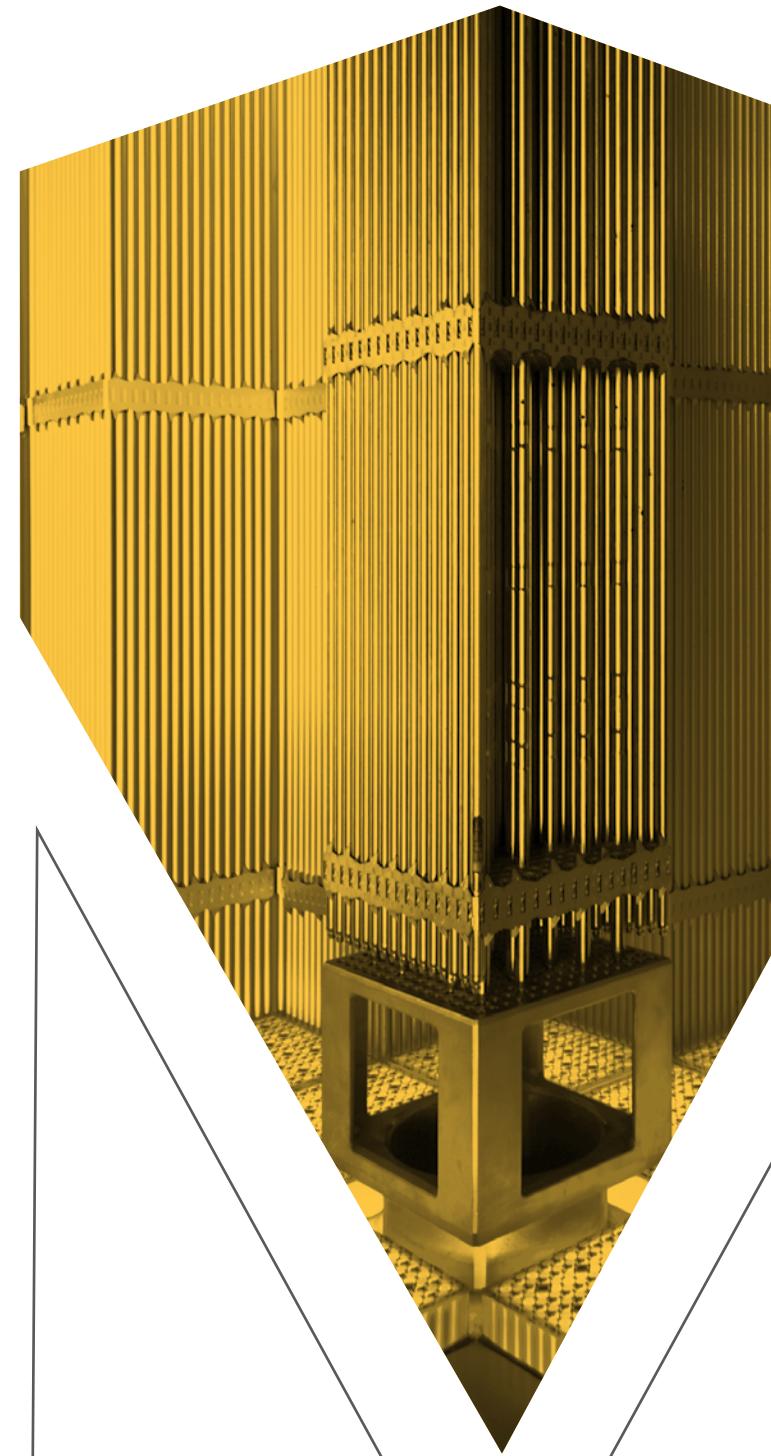
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SECTION 1

GENERAL INFORMATION



1.1 Vision, Mission and Corporate Values

Vision

To be an independent world-class regulatory authority on nuclear safety.

Mission

The mission of the NNR is to provide and maintain an effective and efficient national regulatory framework for the protection of persons, property and the environment against nuclear damage.

Corporate Values

In carrying out its mandate, the NNR adheres to the values of PIVET OPT. These values serve as guiding principles on how the NNR reaches regulatory decisions, how it performs administrative tasks and how its employees interact with their fellow employees and other stakeholders.

Professionalism

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

Integrity

- Our understanding on integrity is having non-biased or fair, objective, consistent, honest, reliable, principled attitudes and attributes

Valuing people

- We demonstrate that we value our people in all that we do

Excellence

- We will deliver outstanding quality of work, efficiently, effectively, innovatively and in a focused manner

Teamwork

- We show impartiality and recognition by appreciating, valuing input and showing empathy to employees

Openness and Transparency

- Sharing relevant information with internal and external stakeholders and creating a platform for receiving feedback

1.2. Strategic goals and priorities

The following Strategic Priorities and Goals were adopted for 2015/2016:

- To provide efficient and effective nuclear regulatory services
- Enhance public communications and strengthen stakeholder relations
- Create a high performance culture
- Ensure the financial viability and sustainability of the organisation
- Develop and maintain sound organisational infrastructure
- Enhance good governance
- Ensure effective human capital management

1.3 Legislative and other mandates

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

- a. Provide for the protection of persons, property and the environment against nuclear damage through the establishment of safety standards and regulatory practices
- b. Exercise regulatory control related to safety over:
 - i. The siting, design, construction, operation, manufacture of component parts, and the decontamination, decommissioning and closure of nuclear installations)
 - ii. Vessels propelled by nuclear power or having radioactive material on board which is capable of causing nuclear damage, through the granting of nuclear authorisations

- c. Exercise regulatory control over other actions to which the Act applies, through the granting of nuclear authorisations)
- d. Provide assurance of compliance with the conditions of nuclear authorisations through the implementation of a system of compliance inspections)
- e. Fulfill national obligations in respect of international legal instruments concerning nuclear safety)
- f. 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, as amended). The Board of Directors is the Accounting Authority in terms of the Public Finance Management Act.

In terms of section 8 (1) and (2), the Regulator is governed and controlled in accordance with the NNR Act, by a Board of Directors to ensure that the objects of the Act are carried out and to exercise general control over the performance of the Regulator's functions.

The NNR operates within the following constitutional, legislative and policy framework:

Constitutional

- Constitution of the Republic of South Africa of 1996 (Act No.108 of 1996)
- Nuclear Energy Act (NEA), (Act No. 46 of 1999)
- National Nuclear Regulator Act (NNRA), (Act No. 47 of 1999)
- Public Finance Management Act (PFMA), (Act No. 1 of 1999)
- National Treasury Regulations
- National Environmental Management Act (NEMA), (Act No. 107 of 1998)
- Promotion of Access to Information Act (PAIA), (Act No. 2 of 2000)
- Promotion of Administrative Justice Act (PAJA), (Act No. 3 of 2000)

Policy

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

a. 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 and to ensure security of energy supply.

b. Radioactive Waste Management Policy and Strategy for the Republic

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 relating to the management of radioactive waste are assessed, and compliance of NNR authorisation holders is monitored.

1.4 IAEA member state

South Africa is 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 (RSA)
- African Regional Co-operative Agreement for Research, Development and Training Related to Nuclear Science and Technology (AFRA) – Fourth Extension

1.5 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.

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 fulfill its international obligations and promote international co-operation to enhance global nuclear safety. In terms of section 5(e) of the NNR Act, the NNR is mandated to fulfill 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 co-ordinates and implements South Africa's Contracting Party (CP) 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 Board is accountable for the overall formulation, monitoring and review of the NNR's corporate strategy and related affairs, while delegating to management the responsibility for business performance and achievement of the organisation's objectives.

1.6 Board Charter

The 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 Authority, 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 Regulator's unique environment.

Staff Reporting to the CEO



Dr Mzubanzi Bismark Tyobeka
Chief Executive Officer



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



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 Phindi Masilo
Manager: Internal Audit



Ms Hlamarisa Kubayi
Project Management



Chairperson's Overview

This past year has been both a challenging and remarkable one for the NNR. It has been challenging due to the reduced grant from government and the increasing demands placed on the organisation. Yet it has also been remarkable as this challenge notwithstanding, the NNR achieved an improved organisational performance rating in discharging its mandate to ensure the protection of persons, property and the environment against nuclear damage in South Africa.

I am pleased to report that the regulated entities continued to maintain satisfactory safety performance results in line with expected requirements. There were no nuclear accidents reported in South Africa during the reporting period. The NNR Board was successful in meeting and fulfilling its fiduciary duties during the period under review.

Governed by the Public Finance Management Act, the board of directors in their capacity as the Accounting Authority of the NNR ensured the financial viability and sustainability of the organisation, resulting in a third consecutive clean audit from the Auditor-General for the reporting period, while discharging their fiduciary duties and exercising control over the performance of the Regulator's functions. Good governance, as outlined in the King III Report, has been the driving force and fundamental to our business practices during the financial year.

Our approach to achieving our strategic objectives was supported by the integrated management of mandatory issues which is underpinned by our corporate governance systems. The board of directors reviewed the effectiveness and overall strength of the governance and controls framework and during the year under review, took the opportunity to streamline and verify several of the NNR's policies and procedures and to refocus its time and attention on material strategic and operational improvements designed to further improve the efficiency of NNR.

As the oversight authority in nuclear safety, the NNR is required to fulfil South Africa's obligations with respect to international instruments concerning the International Atomic Energy Agency's Regulations for the safe transport of radioactive materials. During the period under review, the NNR in conjunction with the Department of Energy, hosted the 5th Review Meeting of the Joint Convention on Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. South Africa also hosted an IAEA Integrated Regulatory Review Service (IRRS) Information Mission which was attended by high level officials from the IAEA, NNR, Department of Health and Department of Energy.

During the period under review, the entity collected R147 million in Authorisation Fees which was 12% more than the previous financial year. The State Grant collection was range-bound at R21.5 million in line with the Medium-Term Expenditure Framework.

As the outgoing chairperson, I believe that the board and the management of the NNR, under the stewardship of the current CEO, is well positioned to take on the opportunities which lie ahead and to continue to discharge the mandate of the NNR. The organisation looks to the future with confidence and an enthusiasm to further strengthen its role off a solid foundation of cost management, world-class regulation and focused leadership. I would like to extend my sincere gratitude to the members of the board for their loyalty and commitment to the organisation and its work over the last two terms and to our Chief Executive Officer, the Management team and the employees of the NNR for their dedication and continued allegiance to service, which has ensured that the NNR was able to deliver these annual results. As an outgoing board, and on their behalf I also extend our appreciation to the Minister of Energy for her confidence in the organisation and the opportunity to serve on this board and make a contribution to the country.

Dr Tracy Cohen

Chairperson: Board of Directors

2016



Chief Executive's Review

This report reflects the activities of the National Nuclear Regulator (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)(i) of the Public Finance Management Act (Act No. 1 of 1999) and Chapter 28 of the Treasury Regulations.

It gives me pleasure to report that the organisation continued to improve its performance over the reporting period. The NNR fulfilled its mandate

to provide effective regulation of the nuclear sector in South Africa and ensured that its performance against strategic objectives were satisfactorily progressed. The organisation achieved a performance rating of 91.8% against the set target of 85%.

The effective implementation of our core nuclear safety regulatory functions is, and always will be, the prime objective of all staff at the NNR. Worker and Public doses remained within regulatory limits and there were no nuclear accidents reported during the period under review. Our regulatory approach continued to evolve as we strive towards working constructively with licensees and stakeholders in contributing to strengthening the nuclear safety regime.

The following represents some of the highlights for the year under review, the details of which are contained in the body of this report.

Summary of key highlights

- Revised general nuclear safety regulations and developed eleven guidance documents to support the implementation of these regulations;
- Noted improvement in observed worker doses at Special Case Mines;
- Received two Nuclear Installation Site Licence (NISL) applications from ESKOM Holdings SOC (Ltd). The sites applied for are Thyspunt in the Eastern Cape and Duynefontyn in the Western Cape.
- Signed a nuclear safety bilateral technical cooperation agreement with the National

Nuclear Safety Administration of the People's Republic of China (NNSA).

- Implemented nuclear safety and security bilateral cooperation workshops with USNRC, UKONR and Rostechnadzor of the Russian Federation.
- Enhanced multilateral nuclear safety co-operation through participation in Regulatory Cooperation Forum (RCF), Multinational Design Evaluation Programme (MDEP) and Forum for Nuclear Regulatory Bodies in Africa (FNRBA).
- Hosted two regional nuclear safety and security training workshops in conjunction with the European commission.

Challenges encountered during 2015/2016

The past year has required NNR to be responsive to the evolving South African nuclear sector whilst we continue to regulate the current nuclear industry. The NNR has also experienced significant change in the last year, much of which has been in readiness to meet the regulatory challenges arising from Governments anticipated nuclear expansion programme and the complexity of the issues facing it.

Some of the regulatory challenges experienced during the reporting period are listed below:

- Budget constraints delayed early engagement activities for New Nuclear Build and the launch of the Centre for Nuclear Safety and Security(CNSS);
- The Regulatory Emergency Response Centre (RERC) project is behind schedule;
- Slow progress made with the integrated regulation of radioactive sources initiative.

I consider the NNR to be well positioned to support regulation of the nuclear industry for the foreseeable future, and to share our knowledge and insights to influence regulatory and operator practice across the continent. I wish to thank the Minister of Energy, the Board of Directors and all Staff who are dedicated to ensuring that NNR helps protect workers, public and the environment against nuclear damage.

Dr Mzubanzi Bismark Tyobeka

Chief Executive Officer
2016

2.1 BOARD OF DIRECTORS



Dr Tracy Cohen
Chairperson



Mr Tshepo Mofokeng
Deputy Chairperson,
Chairperson of the Audit and Risk
Management Committee



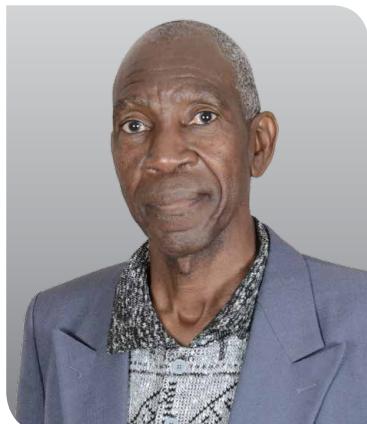
Mr Nikisi Wilson Lesufi
Chairperson Transformation and
Development Committee, Audit and Risk
Management Committee



Dr Thapelo Motshudi
Chairperson
Technical Committee



Mr Jeffrey Leaver
Technical Committee,
Transformation and Development
Committee, Audit and Risk Management
Committee



Mr Kabelo Samuel Kakoma
Audit and Risk Management
Committee



Mr Sibusiso Mimi
Transformation and
Development Committee



Mr Moegamat Ishaam Abader
Transformation and
Development Committee



Mr Katse Maphoto
Transformation and
Development Committee



Dr Bethuel Sehlapelo
Technical Committee

SECTION 2

CORPORATE GOVERNANCE



2.2 Introduction

The Board reviewed the systems and processes of the organisation timeously, and can assure stakeholders that the Regulator 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.

2.3 Parliamentary Portfolio Committee on Energy

The 2015 Annual Report was submitted to the Parliamentary Portfolio Committee on energy. The NNR was exempted from making presentations to the committee.

2.4 Board of Directors

The Board of Directors 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 Regulator is governed and controlled in accordance with the NNR Act by a Board of Directors to ensure that the objects of the Act are carried out, and to exercise general control over the performance of the Regulator's functions.

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

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

2.5 Composition of the Board

The Board comprised of nine non-executive Directors who were independently appointed by the Minister of Energy, an Executive Director (Chief Executive Officer) and three alternate members. Board members, including the Chief Executive Officer (CEO), hold office for a maximum of three years, but are eligible for re-appointment.

NNR Board Members April 2015-March 2016			
Title	Full Name	Date Appointed	Stakeholder Represented
Dr	Tracy Cohen *	1 December 2012	Chairperson – Board
Mr	Tshepo Mofokeng *	1 December 2012	Deputy Chairperson - Board
Mr	Kabelo Samuel Kakoma **	1 December 2012	Civil Society
Mr	Jeffrey Leaver *	1 December 2012	Independent Member
Ms	Lillian Sedumoeng **	30 January 2015	Alternate member DoE
Mr	Nikisi Wilson Lesufi *	1 December 2012	Organised Business Chairperson: TDC
Dr	Thapelo Motshudi *	1 December 2012	Independent Member
Mr	Mark Gordon **	6 December 2013	Alternate Member DWEA
Mr	Katse Mapheko *	1 December 2012	DoE
Mr	Moegamat Ishaam Abader *	1 December 2012	DWEA
Mr	Sibusiso Mimi **	1 December 2012	Organised Labour

Table 1: NNR Board Members

* Reappointment

** New Appointment

#	Name Designation	Designation	Date Appointed
1.	Ms Lillian Sedumoeng *	Alternate	30 January 2015

Table 2 New members appointed *

2.6 Board Meetings and Strategic Workshop

Names	Date of the meeting April 2015-March 2016					
	29 April 2015	27 June 2015 Board Strategic Workshop	28 June 2015 Board Strategic Workshop	30 July 2015	28 October 2015	28 January 2016
Dr T Cohen	A	P	P	P	P	P
Mr T Mofokeng - Deputy	P	P	P	P	P	P
Mr J Leaver	P	P	P	A	P	P
Dr T Motshudi	P	P	P	P	P	P
Mr M Lesufi	P	P	P	P	P	P
Mr I Abader	A	A	A	P	P	P
Mr K Maphepo	P	P	P	P	P	P
Dr M.B Tyobeka	P	P	P	P	P	P
Mr S Mimi	P	A	A	P	P	P
Mr S Kakoma	P	P	P	P	P	P
Ms L Sedumoeng	P	A	A	A	P	A
Mr M Gordon	P	A	A	A	P	A
Dr B Sehlapelo	N/A	P	P	N/A	N/A	N/A

Table 3: Meetings held during the reporting period

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 such

2.7 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
 - Transformation and Development Committee (TDC) Board Committees met at least once per quarter and provided feedback to the Board through Committee reports.
- The NNR Board Committees have each adopted formal terms of reference, which are reviewed annually to ensure continued relevance.

2.7.1 ARMCOM

The Audit and Risk Management Committee 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 T Mofokeng (Chairperson)
- Mr N Lesufi
- Mr J Leaver
- Mr S Kakoma

Names	Date of the meeting April 2015-March 2016				
	14 April 2015	27 May 2015	16 July 2015	13 October 2015	21 January 2016
Mr T Mofokeng	P	P	P	P	P
Mr N Lesufi	P	P	P	P	P
Mr J Leaver	P	P	P	P	P
Ms S Kakoma	P	A	P	P	P

Table 4: ARMCOM Meetings convened

P Member present at the meeting

A Member not present, but tendered an apology

2.7.2 Technical Committee

The Technical Committee comprised four non-executive Directors, who are experts in the technical/legal or environmental field. The role of the Committee is 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 Regulator's mandate

The Members of the Committee were:

- Dr Motshudi (Chairperson)
- Mr J Leaver
- Dr B Sehlapelo
- Mr. K Maphoto

Names	Date of the meeting April 2015-March 2016				
	09 April 2015 WORKSHOP	15 April 2015	15 July 2015	13 Oct 2015	20 Jan 2016
Dr T Motshudi - Chairperson	P	P	P	A	P
Mr J Leaver	P	P	P	P	P
Dr B Sehlapelo	P	P	P	P	P
Mr K Maphoto	P	P	A	P	P

Table 5: Technical Committee meetings convened

P Member present at the meeting

A Member not present but tendered an apology

2.7.3 Transformation and Development Committee (TDC)

TDC comprised of five non-executive directors. The TDC is responsible for determining Human Resources strategies and policies, and recommends 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 TDC were:

- Mr N Lesufi (Chairperson)
- Mr I Abader
- Mr J Leaver
- Mr M Mimi
- Mr K Maphoto

Names	Date of the meeting April 2015-March 2016			
	15 April 2015	15 July 2015	14 October 2015	20 January 2016
Mr N Lesufi (Chairperson)	P	P	P	P
Mr I Abader	A	A	A	A
Mr J Leaver	P	P	P	P
Mr S Mimi	P	P	P	P
Mr K Maphoto	P	A	A	P

Table 6: TDC Committee meetings convened

2.4.4 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. The details of the remuneration for the year ended 31 March 2016 are stated in Note 78 to the Annual Financial Statements on page 124.

2.8 Risk Management

2.8.1 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 manual, which includes the risk management policy, strategy and implementation plan.

2.8.2 Risk Management Strategies to Identify and Manage Risks

The Risk Steering Committee met quarterly to discuss the current and potential risks facing the organisation. The Risk Champions' Forum met quarterly to monitor and ensure that actions to address the identified risks are implemented. The annual risk assessment, inclusive of internal and external risk factors, was conducted in the March 2016. The strategic and operational risk registers were updated accordingly. Risk owners were identified and requested to provide action plans to address the identified risks. These were included in the risk registers.

2.8.3 Progress made in addressing Risks Identified

The risk champions monitored the implementation of actions to address the identified risks on a quarterly basis. Quarterly progress was reported to the Risk Steering Committee, which considered the progress and reported this to the Executive Committee, ARMCOM and the Board. Identification of new risks was a standing agenda item at the Risk Steering Committee and other meetings. Identified risks were assessed and included in the relevant risk registers.

2.9 Internal Audit and ARMCOM

The NNR's Internal Audit is an independent, objective assurance and consulting function, designed to add value and improve NNR's operations. It assists the NNR accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes. This is in compliance with the Institute of Internal Audit Standards and the requirements of the PFMA.

The Manager Internal Audit reports administratively to the CEO and functionally to ARMCOM. The responsibilities of the Internal Audit staff included the following:

- a. Evaluating the organisation's governance processes, including ethics, especially the "tone at the top"
- b. Performing an objective assessment of the effectiveness of risk management and the internal control framework
- c. Systematically analysing and evaluating business processes and associated controls
- d. Providing a source of information, as appropriate, regarding instances of fraud, corruption, unethical behaviour and irregularities

2.9.1 The Scope of Internal Audit Activities included:

- i. Reviewing the risk management processes and practices

- ii. Reviewing the reliability and integrity of financial and operational information and the means used to identify, measure, classify and report such information
- iii. 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 organisation is in compliance
- iv. Reviewing the means of safeguarding assets and, as appropriate, verifying the existence of assets
- v. Appraising the economy and efficiency with which resources are employed
- vi. 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
- vii. Providing a written assessment regarding the effectiveness of the system of internal controls in the organisation
- viii. Conducting a documented review of the key financial reporting controls in identified financial systems and processes every year, 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. A certain amount of capacity is reserved in the planning to allow for once-off/special projects, preliminary investigations and requests from management and ARMCOM. ARMCOM remained responsible for approving the plan based on the agreed scope of work that needed to be performed.

2.9.2 Summary of Audit Work Done

For the 2015-2016 financial year, 16 internal audits were conducted in the Finance, Corporate Support Services (Human Resources, Training, OHS, Facilities and IT) and Technical departments. ARMCOM assisted the Board by reviewing the following areas:

- Integrated Reporting
- Combined Assurance
- Finance Function and the Chief Financial Officer (CFO)
- Internal Audit
- Communications and Stakeholder Relations
- Strategy, Governance and Organisational Performance
- Risk Management
- External Audit
- Compliance with Laws and Regulations
- Ethics

2.10 Fraud and Corruption

The Fraud and Corruption Prevention process was implemented and monitored. Fraud and corruption awareness training was provided to staff. The fraud risk register was developed. Actions to address identified risks were agreed to and implemented as planned. No fraud or potential fraud cases were reported during the period under review.

2.11 Social Responsibility

The NNR implemented the following social responsibility activities during the period under review:

- Women in Nuclear (WIN-NNR) programme
- Techno Girl, job shadowing programme
- National Science Week Awareness
- Nelson Mandela Month Community Upliftment
- Staff donations to assist the child-headed Mpofu family from Atteridgeville
- 16 Days of Activism awareness campaign

SECTION 3

PERFORMANCE OVERVIEW



3. Performance Overview

The NNR's performance continued steadily on an upward trajectory for the current year under review, and the organisation attained an overall performance rating of 91.8 %, eclipsing its target of 85%.

3.1 Programmes, Goals and Objectives

3.1.1 Standards, Authorisations, Reviews and Assessments (SARA) Division

Programme Purpose:

To provide strategic leadership and management in the following areas:

- Authorisations 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, structural analysis, nuclear engineering and structural engineering. The reviews and assessments are conducted with regard to design safety, radiation protection and operational safety
- Managing of special projects, such as the Fukushima project, radiation protection and nuclear new build
- Research and development is conducted on emerging issues regarding radiation protection

Strategic outcome-orientated goal aligned to the programme

- Effective Regulatory Oversight and Framework to assure nuclear safety and security

Strategic objectives

- To process applications for nuclear authorisations in a timely and accurate manner
- To assure that holders have an effective Emergency Preparedness Plan
- To benchmark and update safety standards and regulatory practices in line with national and international norms and requirements
- To establish an independent environmental radio-analytical laboratory

- To strengthen the NNR's ability to undertake independent verification through the use of computer codes
- To ensure that the NNR responds to initiatives relating to nuclear expansions
- To undertake regulatory research that ensures that the regulatory regime is strengthened

3.1.2 Compliance Assurance and Enforcement (CAE) Division

Programme Purpose:

The Compliance Assurance and Enforcement (CAE) Division provides strategic leadership and management of the compliance and enforcement activities, processes and programmes for all the regulated nuclear technologies. The CAE Division also 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

- Effective regulatory oversight and framework to assure nuclear safety and security

Strategic Objectives

- To provide assurance of safety performance of holders through inspections, audits, investigations and taking of enforcement action for identified non-compliance
- To assure effective implementation of nuclear security measures

3.1.3 Communications and Stakeholder Relations

Programme Purpose:

The Communication and Stakeholder Relations Office provides strategic stakeholder engagement advice and corporate communications leadership. The office works with technical experts to develop plain language communication products and maintain various stakeholder engagement platforms. It co-ordinates and manages responses to

enquiries from parliament, media, public and other key stakeholders. This office focuses on the NNR's commitment to develop and maintain trust and confidence in the nuclear safety regulatory regime by working openly and transparently with stakeholders to achieve this goal. This office also manages international liaison and the co-ordination of regulatory co-operation agreements with national and international counterparts.

Strategic outcome-orientated goal aligned to the programme

- Strengthen stakeholder relations and enhance corporate image

Strategic objective

- To strengthen stakeholder engagements and improve public awareness
- Improve public communications and awareness of the NNR
- Improve dissemination of scientific and regulatory information
- Improve NNR quality of work through national and international cooperation

3.1.4 Corporate Support Services

Programme Purpose:

This programme provides strategic leadership and direction in the areas of Human Capital Management, Facilities Management, ICT as well as Occupational Health and Safety (OHS). 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

- Develop and maintain sound organisational infrastructure
- Ensure effective Human Capital Management

Strategic objectives

- To implement and maintain ICT solutions that support business processes
- To implement adequate physical infrastructure that creates a conducive working environment
- To ensure effective talent management

3.1.5 Financial Management and Administration

Programme Purpose:

This programme provides strategic financial leadership for the purposes of managing and directing the finances of the NNR. The management includes financial planning, financial reporting, safeguarding of assets and enforcing adherence to applicable legislations, 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 prudent financial management
- To ensure that the NNR continues to remain a financially viable entity
- To ensure sound and compliant financial management within the NNR

3.1.6 Internal Audit

Programme Purpose:

Internal audit provides assurance to the NNR's stakeholders that the organisation operates in a responsible manner by performing, among others, the functions described in section 2.9.1.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objectives

- To improve and maintain an effective system of internal control
- To improve and maintain an effective internal audit system

3.1.7 Risk Management

Programme Purpose:

Risk management is a systematic and formalised process instituted by the organisation to identify, assess, manage and monitor risks. The Internal Audit Department assists management by co-ordinating and facilitating the risk management activities within the NNR.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- To improve and maintain an effective system of risk management

3.1.8 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 of Directors, 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 for the Board and the organisation. 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 execution of its mandate in line with the NNR Act. This is done by utilising a strategic plan that is aligned to the National Planning Framework for SOEs. The function also monitors and evaluates organisational performance at both operational and strategic levels, providing performance-enhancing solutions that address performance gaps that will 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
- Create a high performance culture

Strategic objective

- To ensure continuous development and maintenance of independent and effective governance structures
- To establish and maintain a high performance culture through effective performance systems and people management

3.1.9 Legal Counsel

Programme Purpose:

The purpose of this function is to provide the organisation with comprehensive legal advice and support on all legal matters.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- To ensure compliance with applicable legislation and policy frameworks

3.1.10 Project Management Office

Programme Purpose:

The purpose of this function is to provide the organisation with consistent standardised project management methodology. The Project Management Office (PMO) strives to introduce best practice principles and standardise project management tools and

techniques to assist the organisation in achieving its strategic objectives through delivery of projects.

Strategic outcome-orientated goal aligned to the programme

- Enhance good governance

Strategic objective

- To ensure standardisation, centralisation, governance and oversight of strategic projects

3.2 Performance Information 2015/2016

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
1. Regulate safety and security of nuclear facilities and activities by conducting reviews and assessments and issuing of conditions of authorisation	RM1a: Review and assessment of submissions received from holders	RM1a: % of reviews and assessments	100%	100%	97.5%	Reviews and assessment carried out in terms of plan. Additional resources are needed.	
	RM1b: Implementation of the Steam Generator Replacement project (SGR)	RM1b: % Implementation of project plan	New KPI for 2015/16	100%	77.3%	High volume of submissions received from Eskom. Delays due to inadequate coverage of manufacturing phase of the project by the NNR. An Authorised Inspection Authority will be appointed.	
	RM1c: Implementation of the remediation strategy	RM1c: % Implementation of project plan	New KPI for 2015/16	100%	100%		
2. To provide assurance of compliance with conditions of authorisation through a system of compliance inspections, audits and investigations	RM2a: Compliance assurance activities conducted	RM2a: Number of activities conducted	Inspections 364/380	Inspections 420	420 (100%)		
			NPP: 48/46	NPP: 72	72 (100%)		
			Nuc. Sec: 21/29	Nuc. Sec: 21	21 (100%)		
			NTWP: 126/118	NTWP 146	146 (100%)		

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
			NORM: 185/196	NORM: 181	181 (100%)		
			Audits: 19 95%	Audits: 24	24 (100%)		
			NPP: 4	NPP: 2	2 (100%)		
			NTWP: 3	NTWP: 6	6 (100%)		
			NORM: 12	NORM: 16	16 (100%)		
			Samples: 504 100%	Samples: 334	449 (100%)		
			NPP: 44	NPP: 75	0 (0%)	NPP were faced with challenges for collecting samples due to elements such as lack of equipment, access permits to private properties and general logistics for sample analysis (a memo was submitted to the Board in Q3 highlighting these challenges)	
			NTWP: 79	NTWP:78	79 (100%)		
			NORM: 381	NORM:181	370 (100%)		Additional samples were taken as a result of the outcomes of review of previous records and inspector's on site experience/ observation

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
2. Ensure effective delivery of regulation and enforcement	RM2b: Enforcement actions undertaken	RM2b: % enforcement actions	100%	100%	100%		11 directives issued
	RM2c: Inspector training and qualifications programme developed	RM2c: % Inspector training and qualifications programme	New KPI for 2015/16	Manual developed & implemented	85%	Manual in development with some modules completed	
	RM2d: Safety goals and compliance indicators developed	RM2d: Safety goals and compliance indicators	New KPI for 2015/16	100% developed goals & indicators	100%		
3. Provide assurance of effectiveness of emergency planning and preparedness arrangements	RM3a: Planning and conducting of regulatory emergency exercise (conducting exercise per schedule)	RM3a: Conducting regulatory exercises as per schedule	100%	100%	100%		

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
	RM3b: Upgrade of RERC emergency procedures	RM3b: % of implementation of the project plan	New KPI for 2015/16	100%	73.6%	The following are in a draft form: PRO-ASS06 (Audio visual and communications system); PRO-ASS15 Transportation Risk Assessment; PRO-ASS17 Media and Public information during a nuclear and radiological emergency; PRO-ASS21 Activation of the Media Centre; PRO-ASS20 International Communication and obligations.	
4. Strengthen independent analytical verification and capacity within the NNR	RM4a: Commissioned laboratory	RM4a: Operational Laboratory	98.36%	30% of the verification plan	100%		.
	RM4b: Completed RERC	RM4b: Operational RERC	New KPI for 2015/16	100%	90%	Variance relates to commissioning of installed Plant Data replication systems, user training and review of on-line radiation monitoring software.	

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
5. Develop, update and implement regulatory standards for regulation of NPP, fuel cycle, research indicators, NORM facilities and other radio-active sources	RM5a: Development of regulations	RM5a: % of regulations developed	New KPI and Objective for 2015/16	100%	85%	An Organisational Design and needs analysis is underway. High Level discussions are ongoing to ensure harmonisation.	
	RM5b: Development of Regulatory Guidance documents	RM5b: % of developed Regulatory Guidance documents	New KPI and Objective for 2015/16	2 guidance documents	100%		
	RM5c: Development of Technical Assessment Guides	RM5c: % of Development of Technical Assessment Guides	New KPI and Objective for 2015/16	100%	100%		
6. To ensure that the NNR responds to initiatives related to nuclear expansion	RM6: Participation in international forum	RM6: % level of participation	100%	100%	100%		
7. To foster and apply safety related regulatory research to enhance regulatory programmes	RM7a: Research plan of action, relevant studies covering emerging areas for safety regulations	RM7a: development of the regulatory research framework	100%	Framework	100%		
	RM7b: completed regulatory research plan	RM7b: % of regulatory research plan completed	100%	100%	100%		

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
8. To enhance nuclear security including nuclear security culture	RM8:Workshops for staff	RM8:Number of workshops for staff	80%	100%	100%		
9. To benchmark and update safety standards and regulatory practices in line with national and international norms and requirements	RM9a: Preparation for IRRS mission	RM9a: IRRS Project plan	New KPI for 2015/16	100%	100%		
	RM9b: Conduct Self-Assessment Lifecycle 2: Thematic Modules	RM9b (i): Emergency preparedness and Response	95.4%				
		RM9b (ii): Occupational Radiation Protection	New KPI for 2015/16				
		RM9b (iii): Regulator Framework for Research Reactors	New KPI for 2015/16				
		RM9b (iv): Safe Transport of Radioactive Material	New KPI for 2015/16				

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
10. To fulfil relevant international nuclear obligations and give effect to agreement to which the NNR is party or delegated to	RM10a: Participation in the AFRA projects	RM10a: % level of participation in the AFRA projects	New KPI and objective for 2015/16	100%	100%		
	RM10b: Reporting in terms of the Joint Convention Report	RM10b: Joint Convention Report	New KPI and objective for 2015/16	100%	100%		
	RM10c: Participate in the Group 5 meetings	RM10c: % level of participation in the Group 5 meetings	New KPI and objective for 2015/16	100%	100%		
11. Improve public communication and awareness of the NNR	RM11: Implementation of activity schedule	RM11: % implementation of the activity schedule	100%	100%	100%		
12. Improve dissemination of scientific and regulatory information	RM12: % implementation of the activity schedule	RM12: % implementation of the activity schedule	New KPI for 2015/16	100%	100%		
13. Improve NNR quality of work through national and international cooperation	RM13: % implementation of the activity schedule	RM13: % implementation of activity schedule	100%	100%	100%		

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
14. To ensure that the NNR continues to remain a financially viable entity i.e. adequate revenue to meet NNR strategic objectives.	FM1: Regulatory activities are adequately funded	FM1: % of Regulatory activities are adequately funded	100%	% adequacy of funding	89%	Government grant has declined over the past 2 years; although cost containment measures are in place, the organisation's financial position continues to weaken due to the reduction in grant.	
15. To ensure sound and compliant financial management within the NNR	FM2: Unqualified Report	FM2: Rating (Qualified / unqualified)	100%	Unqualified Audit Report	100%		
16. To improve and maintain an effective system of internal control and risk management	PM1a: Management of Risk Register	PM1a: % Reduction in the number of high impact risk	100%	100%	100%		
	PM1b: Effective implementation of action plan for the close out of audit findings	PM1b: Reduced number of outstanding audit findings	94.1%	100%	85%	15% of actions due at the end of the financial year were not fully implemented as planned. These include processes development, which will mainly be finalised by June 2016, as per IMS Plan	

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
17. To maintain and enhance independent and effective governance structures.	PM2: Level of Effectiveness of governance structures	PM2: % Compliance to Stipulated governance requirements	100%	100%	100%		
18. To ensure compliance with applicable legislation and policy framework	PM3: Compliance levels	PM3: % Compliance to prioritized legislation for 2015/16	93.8%	100%	97.2%	Some legislation was identified as not impacting directly on the NNR. Legal Counsel has been sought to provide direction in this regard	
19. Define and establish internal integrated quality management system, programs and standards	PM4: Develop an integrated system	PM4: % level of IMS development	New KPI and objective for 2015/16	100%	30%		
20. Determine the value derived from capacity building through impact on performance	PM5: Improvement on performance target	PM5: % improvement on organizational performance	New KPI for 2015/16	5%	97%	From 90 to 92% shows a 2% improvement as opposed to 5% making it a 97% achievement of target.	

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
21. Maintain organizational performance management system and implement monitoring systems	PM6a: accurate project information reporting	PM6a: % level of accuracy of project information	New KPI for 2015/16	100%	100%		
	PM6b: Capital projects delivered to specification	Pm6b: % of capital project delivered to specification	New KPI for 2015/16	80%	72.5%	Cape Town office relocation project: 100%; Cape Town new construction 0%; Lab 100%; RERC 90%.	
	PM6c: Implementation of the Strategy Management Program	PM6c: % level of implementation of Strategy Management Program	100%	100%	100%		
	PM6d: Improvement on organizational baseline rating	PM6d: Business excellence rating	100%	500 points	69.8%	Based on the excellence assessment, 349/500 excellence points were achieved organisationally. Steps are being taken to ensure improvement in the next cycle.	
22. Develop and maintain sound organizational infrastructure	PM7: implementation of the organizational facilities plan	PM7: % level of implementation of the organizational facilities plan	0%	90%	100%		

Strategic Objective	Measure	Performance Indicator	Actual Achievement 2014/15	Planned Target 2015/16	Actual Achievement 2015/2016	Comment on variance	Comment on variance for over achievement in 2015/16
23. To develop and maintain adequate and suitable ICT infrastructure	PM8: implementation of the ICT strategy	PM8: % implementation of the ICT strategy	94.35%	95%	100%		Achieved 95.6% of the targeted 95%.
24. Implement an effective and integrated talent management system	LM1a: Implementation of the system	LM1a: % level of implementation	New KPI for 2015/16	100%	100%		
	LM1b: Effective capacity building programme	LM1b: % development & implementation	New KPI for 2015/16	90%	100%		
25. Maintain a positive employee relations environment	LM2a: implementation of wellness plan	LM2a: % level of implementation of the wellness plan	New KPI and objective for 2015/16	100%	98%	The service provider made changes mid-year which impacted on the in-house wellness program.	
	LM2b: Leadership development	LM2b: % implementation plan	New KPI and objective for 2015/16	100%	100%		
26. Implement an Employment Equity plan	LM3: Compliance with EE plan	LM3: % level of compliance with EE plan	New KPI and objective for 2015/16	100%	100%		
Organisational Performance 2015/16					91.98%		

Table 7: Performance information

3.3 Challenges encountered by the NNR during 2015/2016

New Nuclear Build Early Engagement Activities

Lack of adequate funding for the New Nuclear Build Programme early engagement activities continued to subdue the Regulator's ability to develop requisite capacity and skills to efficiently and economically regulate the project. Given that an application of Nuclear Installation Site Licence was received during the last quarter of the financial year, the afore-mentioned lack of capacity and skills will invariably lead to perpetuation of over-reliance on the international skills pool. This is defeating South Africa's ambition to significantly localise major CAPEX projects and stimulate local economic growth that would create the much-needed jobs.

Regulatory Emergency Response Centre (RERC)

The delays in contracting and execution of technical activities for the project, such as installation of radio-activity monitoring facilities around the licenced sites, continued during the year under review thereby pushing back the planned operationalisation of the facility during the year, as planned. At the end of the reporting period, all the contracts were concluded and the last few installations were in progress, with connection expected during the second quarter of 2016/2017 financial year.

2014/2015: R17 million Cape Town office upgrade

The CAPEX project for provision of adequate accommodation at the NNR's Cape Town office did not progress as fast as envisaged due to challenges in the Supply Chain Management process. This resulted in an extension of the lease for interim accommodation by an additional 12 months to November 2018. At the end of the reporting Period, the project was on track and the principal agent appointed was finalising the technical work, including detailed designs, paving the way for procurement of the services of the contractor.

Centre for Nuclear Safety and Security

Instability at potential partner institutions of higher learning delayed the project launch and operations during the year under review. Lack of financial commitment and support by the State continued to be one of the biggest risks, remaining as a threat to the ability of the NNR to drive this project with the pace and vigor envisaged.

Integrated regulation of radioactive sources

Although notable progress was made in conducting due diligence in this project, the planned incorporation of required activities from the Department of Health could not be achieved by the end of the financial year as planned. The team is working hard to finalise the process in time to include it in 2017 Medium-Term Expenditure Framework (MTEF) process.

3.4 Linking performance with budgets

The NNR had nine key strategic objectives during the year under review. The following table indicates the resources allocations and the utilisation for all the key objectives, respectively.

Programme	Code	Description	Budget R	Actual	Variance Under/(Over) R	Budget R	Actual YTD R	Variance Under/(Over) R
To process applications for Nuclear authorisations in a timely and accurate manner	135, 137 and 138	Personnel	37 883 078	36 417 116	1 465 962	33 502 134	31 258 930	2 243 204
		Goods & Services	5 998 427	5 755 057	243 370	5 142 900	5 775 802	(632 902)
		Total	43 881 505	42 172 173	1 709 332	38 645 034	37 034 732	1 610 302
To ensure effective implementation of Nuclear security measures by authorisation holders	175 and 139	Personnel	3 030 706	3 057 976	(27 270)	5 032 664	3 643 658	1 389 006
		Goods & Services	794 821	637 049	157 772	1 787 500	1 105 537	681 963
		Total	3 825 527	3 695 025	130 502	6 820 164	4 749 195	2 070 969
To establish an independent verification capability for the NNR	136 and 140	Personnel	15 675 246	14 822 571	852 675	14 020 631	13 150 554	870 077
		Goods & Services	3 733 815	5 728 345	(1 994 530)	4 570 500	5 970 987	(1 400 487)
		Total	19 409 061	20 550 916	(1 141 855)	18 591 131	19 121 541	(530 410)
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	26 331 935	24 291 184	2 040 751	23 120 920	20 535 333	2 585 587
		Goods & Services	3 313 094	3 175 826	137 268	4 328 774	2 473 288	1 855 486
		Total	29 645 029	27 467 010	2 178 019	27 449 694	23 008 621	4 441 073

Programme	Code	Description	Budget R	Actual	Variance Under/(Over) R	Budget R	Actual YTD R	Variance Under/ (Over) R
Good governance	124, 125, 126, 127 and 128	Personnel	13 034 808	12 067 364	967 444	10 625 966	9 502 141	1 123 825
		Goods & Services	7 526 400	8 056 399	(529 999)	8 284 010	6 385 944	1 898 066
		Total	20 561 208	20 123 763	437 445	18 909 976	15 888 085	3 021 891
Financial viability and sustainability	155 156 and 158	Personnel	8 663 440	11 698 135	(3 034 695)	7 610 599	18 446 023	(10 835 424)
		Goods & Services	11 958 892	29 387 326	(17 429 133)	19 080 000	25 685 350	(6 605 350)
		Total	20 622 332	41 085 461	(20 463 828)	26 690 599	44 131 373	(17 440 774)
High performance and culture, effective human capital management	141, 142, 144 and 145	Personnel	5 505 927	5 910 038	(404 111)	6 049 464	4 754 524	1 294 940
		Goods & Services	8 636 400	6 353 491	2 282 909	8 110 500	6 300 312	1 810 188
		Total	14 142 327	12 263 529	1 878 798	14 159 964	11 054 836	3 105 128
Sound organisational infrastructure	143	Personnel	2 285 214	2 283 771	1 443	2 009 025	2 006 602	2 423
		Goods & Services	9 027 204	9 000 182	27 022	11 201 000	6 295 536	4 905 464
		Total	11 312 418	11 283 953	28 465	13 210 025	8 302 138	4 907 887
Stakeholder relations and corporate image	129	Personnel	2 276 752	2 319 137	(42 385)	2 063 479	1 631 637	431 842
		Goods & Services	3 698 540	3 803 911	(105 371)	4 645 000	4 445 778	199 222
		Total	5 975 292	6 123 048	(147 756)	6 708 479	6 077 415	631 064

Table 8: 2015-2016 Performance with budgets

3.5. Summary of financial information

3.5.1 Revenue collection

The NNR is mainly funded from two sources of income, i.e. Authorisation Fees and State Grants (conditional and unconditional) in the form of transfers. As shown in Table 9, during the period under review, the entity collected R147 million in Authorisation Fees – 12% more than the previous financial year. This is equivalent to the gazetted increase for the financial year under review, indicating that there was no significant growth in regulated activities.

The subdued economic activities in South Africa continued to threaten financial viability of our clients' operations and thereby negatively impacted our ability to collect all our receivables timely as targeted. The State Grant collection was range-bound at R21.5 million in line with the Medium-Term Expenditure Framework. This is, however, forecasted to decline significantly to R16 million in the 2016/17 financial year. This will compel the scaling down of operations and constrain some crucial planned activities in line with available resources.

Sources of revenue	2015/2016			2014/2015		
	Estimate	Actual Amount Collected	(Over)/ Under Collection	Estimate	Actual Amount Collected	(Over)/Under Collection
	R'000	R'000	R'000	R'000	R'000	R'000
Authorisation Fees	143 739	147 443	3 704	131 871	132 065	194
State Grant	21 487	21 487	–	33 697	33 697	–
Other Income	4 148	12 430	8 282	4 165	7 411	3 246
Total	169 74	181 360	11 986	169 733	17 173	3 440

Table 9: Revenue Sources

Programme	Description	Code	Total Budget R	2015/2016			2014/2015	
				Expenditure YTD R	Variance Under/(Over) R	Total Budget R	Expenditure YTD R	Variance Under/(Over) R
SUPPPORT SERVICES	124-129:141-145:155-158	Personnel	31 766 141	34 278 442	(2 512 301)	24 597 317	28 182 901	(3 585 584)
		Goods & Services	39 156 636	56 049 766	(16 893 130)	50 267 866	37 145 110	13 122 756
		Total	70 922 777	90 328 208	(19 405 431)	74 865 183	65 328 014	9 537 172
SARA DIVISION	135-140	Personnel	55 399 720	53 108 354	2 291 366	44 384 893	40 494 947	3 889 946
		Goods & Services	12 065 242	10 434 932	1 630 310	12 583 196	8 830 836	3 752 360
		Total	67 464 962	63 543 286	3 921 676	56 968 089	49 325 783	7 642 306
CAE DIVISION	171-175	Personnel	27 521 245	25 480 463	2 040 782	19 058 160	17 915 315	1 142 845
		Goods & Services	3 465 015	3 327 747	137 267	4 913 463	2 855 917	2 057 546
		Total	30 986 260	28 808 210	2 178 049	23 971 623	20 771 232	3 200 391

Table 10: Programme Expenditure for Support Services, SARA and CAE Divisions.

3.5.2 Support Services

This programme achieved 92% expenditure on compensation of employees for the year under review. The 8% on personnel is attributed to few vacancies that occurred during the year and took a bit longer to fill including that of Legal Counsel, Administrator: Projects and Librarian. With the exception of the above, the structure was over 95% populated throughout the year.

The division's performance on goods and services was 43% over-expenditure attributed to R13 million depreciation which was not budgeted for due to the persistent budget constraints and R2 million for provision for bad debts. The current challenge is expected to continue until the increase on state grants targeted for 2017/2018 financial year.

3.5.3 Standards, Authorisations, Reviews and Assessment (SARA)

This division continued to perform very well against its budget from 6% in the past financial year to 4% on personnel costs during the year under review. The insignificant variance in this regard was caused by delays in filling newly established positions in the first quarter as decided by management to allow finalisation of salary negotiations. The programme achieved savings of 14% on goods and services mainly due to the continued cost saving drive applied during the year, to cater for some expenses not budgeted for during the year, such as depreciation. The amount saved was utilised to defray such expenditure at the end of the financial year.

3.5.4 Compliance Assurance and Enforcements (CAE)

This division demonstrated an impressive record of financial discipline during the year and achieved 93% and 96% expenditure against its budget on personnel cost, and goods and services respectively. The 7% under-expenditure on personnel cost was as a result of delayed appointments on new positions as well.

At the end of the reporting period, the RERCC was nearing completion and all activities were implemented with the exception of the installation of online monitors and the commissioning of the project.

The Cape Town site office project progressed with the appointment of a principal agent during the 4th quarter of the financial year under review.

2015/2016			2014/2015			
Infrastructure projects	Budget	Actual Expenditure	(Over)/ Under Expenditure	Budget	Actual Expenditure	(Over)/ Under Expenditure
	R'000	R'000	R'000	R'000	R'000	R'000
Radio Activity Analysis Laboratory	-	-	-	1 709	1 709	-
Regulatory Emergency Control Centre	12 100	5 653	6 447	16 000	3 900	12 100
Cape Town Refurbishment	11 700	203	11 497	13 000	1 300	11 700
Total	23 800	5 856	17 944	30 709	6 909	23 800

Table 11: The Capital Investment, Maintenance and Asset Management Plan

The NNR continued with the Regulatory Emergency Control Centre (RERCC) and Cape Town site office capital projects during the year under review and successfully completed and commissioned the Radio Activity Analysis Laboratories both in Pretoria and Cape Town, see Table 11.

SECTION 4

HUMAN RESOURCES MANAGEMENT



4. HUMAN RESOURCES MANAGEMENT

4.1 Overview

During the financial year, the HR focus was on developing and implementing a fully integrated talent management system to improve related processes such as recruitment and selection, remuneration of employees, career progression, succession planning and training and development.

4.2 HR priorities for the period under review and the impact of these priorities

The NNR implemented an adapted form of the International Atomic Energy Agency's Guidelines for the Systematic Assessment of the Competence Needs of the staff of a Regulatory Body (SARCoN) model in order to develop competency profiles for all staff. These competency profiles form the foundation of an integrated talent management system. The NNR commenced a job evaluation exercise and developed a career progression model allowing for dual career paths for technical staff which will be implemented in the next financial year.

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

The NNR continued to support the ongoing development of skilled employees to meet the future needs of the regulatory body through bursaries and scholarships which are funded by international partners as well as through the internship programme.

4.4 Challenges

The recruitment of experienced engineers continued to pose a problem, however, the NNR has 12 engineering bursars who are expected to graduate starting from end of 2017. These bursars have service obligations to the NNR on completion of their studies.

General resource challenges are being experienced due to budget cuts.

4.5 Policy Development

All policies and procedures were reviewed as part of the implementation of an integrated management system for the regulator.

Level	Personnel Expenditure (R'000)	% of Personnel Expense to total Personnel Cost	No. of Employees	Average Personnel Cost per Employee (R'000)
Top Management (F)	-	-	-	-
Senior Management (E)	R5 465 098	4.93%	3	R1 821 699
Professional Qualified (D)	R84 951 188	76.7%	85	R999 426
Skilled (C)	R17 627 197	15.92%	36	R476 411
Semi-skilled (B)	R789 763	0.71%	4	R197 441
Unskilled (A)	-	-	-	-
Interns	R1 920 000	1.73%	16	R120 000
TOTAL	R110 753 246	100%	145	R763 815

Table 12: Personnel Cost by Salary band

Category	Performance Rewards	Personnel Expenditure (R'000)	% of Performance Rewards to total Personnel Cost (R'000)
Top Management	-	-	-
Senior Management	R461 227	R5 465 098	0.06%
Professional qualified	R5 939 375	R84 951 188	0.94%
Skilled	R1 043 220	R17 627 197	5.36%
Semi-skilled	R62 986	R789 763	0.42%
Unskilled	-	-	-
Interns	-	R1 920 000	-
TOTAL	R7 506 809	R 107 416 246	6.78%

Table 13: Performance Rewards

Category	2014/2015 No. of Employees	2015/2016 No. of Employees	2016/2017 Vacancies	% Vacancies
Top Management	0	0	0	0
Senior Management	3	3	0	0
Professional qualified	80	85	2	2%
Skilled	35	37	0	0
Semi-skilled	3	4	0	0
Unskilled	0	0	0	0
Interns	15	16	1	6%
TOTAL	136	145	3	2%

Table 14: Employment and Vacancies

Salary Band	Employment at beginning of period	Appointments	Terminations	Employment at the end of the period
Top Management	0	0	0	0
Senior Management	3	0	0	3
Professional qualified	80	7	2	85
Skilled	35	4	2	37
Semi-skilled	3	1	0	4
Unskilled	0	0	0	0
Interns	15	1	0	16
Total	136	13	4	145

Table 15: Employment Changes

Reason	Number	% of total No. of Staff Leaving
Death	0	0
Resignation	1	0.69%
Dismissal	3	2%
Retirement	0	0
Ill health	0	0
Expiry of contract	0	0
Other	0	0
Total	4	2.69%

Table 16: Reasons for Staff Leaving

Nature of Disciplinary Action	Number
Verbal Warning	0
Written Warning	2
Final Written warning	1
Dismissal	3

Table 17: Employee Relations: Misconduct and Disciplinary Action

Levels	Male							
	African		Coloured		Indian		White	
	Current	Target	Current	Target	Current	Target	Current	Target
Top Management	0	0	0	0	0	0	0	0
Senior Management	1	1	1	1	0	0	0	0
Professional Qualified	25	31	8	6	4	4	10	10
Skilled	9	10	0	0	0	0	0	0
Semi-skilled	1	1	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0
TOTAL	36	43	9	7	4	4	10	10

Table 18: Equity Target and Employment Equity (as per the EE report filed in December, 2015)

Levels	Female							
	African		Coloured		Indian		White	
	Current	Target	Current	Target	Current	Target	Current	Target
Top Management	0	0	0	0	0	0	0	0
Senior Management	0	1	0	0	0	0	0	0
Professional Qualified	23	21	0	1	2	2	2	2
Skilled	19	18	1	1	0	0	5	5
Semi-Skilled	2	3	0	0	0	0	1	0
Unskilled	0	0	0	0	0	0	0	0
TOTAL	45	43	1	2	2	2	8	7

Table 19: Equity Target and Employment Equity Status

Levels	Disabled Staff			
	Male		Female	
	Current	Target	Current	Target
Top Management	0	0	0	0
Senior Management	0	0	0	0
Professional Qualified	1	1	0	0
Skilled	0	0	1	1
Semi-skilled	0	0	0	0
Unskilled	0	0	0	0
TOTAL	1	1	1	1

Table 20: Staff with Disabilities

SECTION 5

REGULATION OF NUCLEAR ACTIONS



5. REGULATION OF NUCLEAR ACTIONS

CORE BUSINESS

Nuclear safety regulation by the NNR is performed by two technical divisions, namely, Standards, Authorisations, Reviews and Assessments (SARA), and Compliance Assurance and Enforcement (CAE).

5.1 Standards, Authorisations, Reviews and Assessment (SARA) Division

The SARA Division is primarily responsible for:

- Development of nuclear safety standards related to the core areas, such as radiation, nuclear waste and transport safety
- Development of nuclear security regulatory framework
- Granting authorisations for nuclear installations, nuclear vessels, mining and minerals processing facilities/activities, and certificates of exemption
- Conducting safety assessments for all actions, projects, and regulated activities by reviews and evaluations
- Managing special nuclear-related projects of a regulatory nature

Activities of the SARA Division include:

- Developing and implementing regulatory programmes for the regulation of NPPs, fuel cycle activities, research reactors, NORM facilities and other actions
- Regulating the safe operation of existing holders of nuclear authorisations and preparation for applications related to nuclear expansion
- Conducting regulatory radiological emergency preparedness and response, and nuclear security exercises
- Confirming adequacy of periodic self-assessment radiological emergency and security exercises conducted by authorisation holders

5.1.1 Safety case review and assessment

A safety case is a collection of safety arguments and evidence in support of the safety of a facility or action. The safety case provided must identify and characterise all sources of radiation associated with the facility, and all possible exposure pathways that may arise from such sources, under normal operating conditions and under accident situations. Incorporated in the safety case submission is the nuclear security and/or physical protection programme, consisting of the various essential elements and sub-components including security during transport and cyber security measures, under normal operating conditions and contingencies.

The NNR undertakes an evaluation of the submitted documentation to ensure that the action or facility will meet the standards and requirements for safe operations. The facility-specific design basis threat must be in place for ensuring effective and adequate implementation of physical protection systems. From the evaluation, conditions are identified for inclusion in the nuclear authorisation.

5.1.2 Nuclear authorisation process

Nuclear authorisation refers to the process of granting a written approval by the National Nuclear Regulator to applicants and/or operating organisations to perform nuclear-related activities, as detailed in the scope of authorisation. The authorisation process involves receiving, reviewing and approval of authorisation requests from applicants.

The NNR Act makes provision for the granting of four categories of nuclear authorisation. These are:

- Nuclear Installation Licences
- Nuclear Vessel Licences
- Certificates of Registration
- Certificates of Exemption

Prior to the granting of an authorisation, the applicant is required to apply to the NNR, in the prescribed format, and furnish all such information as required by the Board. The

intended activities must be detailed and a demonstration of safety and compliance to the NNR requirements must be submitted. The application must address all aspects relating to safety for the design, manufacturing, construction, commissioning, operating, and maintenance and decommissioning of the nuclear facility.

The authorisation conditions represent a framework within which the applicant or holder of the nuclear authorisation is obliged to comply with particular requirements in respect of design, operation, maintenance and decommissioning. The conditions of authorisation also oblige the holder of the authorisation to provide a demonstration of continuing compliance through the submission of routine and non-routine reports.

5.2 Compliance Assurance and Enforcement (CAE) Division

The CAE Division is primarily responsible for:

- The management of all Compliance Assurance and Enforcement activities, processes and programmes for regulated nuclear technologies and actions at the NNR
- Ensuring the establishment of effective and efficient systems related to Compliance Assurance and Enforcement activities, particularly relating to nuclear safety and security. These include conducting compliance assurance inspections, audits, investigations, surveillances, environmental monitoring and sampling activities

Activities of the CAE Division include:

- Providing assurance of safety performance of holders of a nuclear authorisation through inspections, audits, investigations and taking enforcement action for identified non-compliances
- Strengthening the independent analytical verification capability and capacity within the NNR
- Enhancing regulatory programmes and the application of safety-focused research

5.2.1 Compliance assurance

The NNR conducts compliance assurance activities to determine the extent to which holders of nuclear authorisations comply with the conditions of authorisation. The extent and nature of the NNR's compliance assurance activities is commensurate with the type of authorisation issued and the risk posed by the facility or action. The compliance assurance activities involve a combination of audits, routine inspections, non-routine inspections, review of routine reports and review of occurrence reports.

5.2.2 Enforcement

Where non-compliance with the conditions of authorisation is identified, the NNR may initiate enforcement actions. Enforcement actions are designed to respond to non-compliances with specified conditions and requirements. The enforcement actions are commensurate with the seriousness of the non-compliance and may take the form of written warnings, penalties, curtailment of operations and suspension of the authorisation, or ultimately withdrawal of the authorisation. In all cases, the holder of the authorisation is required to remedy the non-compliance by:

- Performing a thorough investigation in accordance with an agreed timescale. Taking all necessary measures to prevent recurrence.

5.3 Nuclear authorisations active for the period under review

Authorisations	Nuclear Installations (NIL)
NIL 01	Koeberg Nuclear Power Station
NIL 02	SAFARI 1 Research Reactor
NIL 03	P2700 Complex
NIL 04	Thabana Complex comprising the following facilities: Thabana Pipe Store Thabana Radioactive Waste Storage Facility: Thabang Containerised Radioactive Waste Storage Facility CaF2 Ponds
NIL 05	HEU Vault-K0090
NIL 06	A 8 Decontamination Facility
NIL 07	Building A West Drum Store
NIL 08	ELPROD in Building P 2600
NIL 09	UMET in Building P 2600
NIL 10	Conversion Plant Complex
NIL 11	Area 14 Waste Management Complex
NIL 12	Quarantine Storage Facility
NIL 13	VYB Pelindaba East Bus Shed Complex
NIL 14	Pelindaba East Evaporation Ponds Complex
NIL 15	Oil Purification Facility
NIL 16	Area 21 Storage Facility
NIL 17	BEVA K3 Storage Complex
NIL 18	Area 16 Complex
NIL 19	Area 40 Complex
NIL 20	Area 27 De Heeling Facility

Authorisations	Nuclear Installations (NIL)
NIL 21	J Building
NIL 22	D Building
NIL 23	C Building
NIL 24	Building P 2800
NIL 25	Building XB
NIL 26	BEVA Eva Poration Ponds
NIL 27	Building P 2800
NIL 28	NIL 28 Vaalputs National Radioactive Waste Disposal
NIL 29	Area 26
NIL 30	E Building
NIL 31	Dorbyl Camp
NIL 32	X Building
NIL 33	Building P 1500
NIL 34	YM Vacuum Workshop
NIL 35	V H Building Laboratories
NIL 36	P 1900 Laboratories
NIL 37	P 1600 Laboratories
NIL 38	Fuel Development Laboratories Complex
NIL 39	NTP Radiochemicals Complex
NIL 40	Pelindaba Analytical Laboratories (PAL)
NIL 41	Liquid Effluent Treatment Facility Complex
NIL 42	B1-Building Basement

Table 21: Nuclear authorisations active for the period under review

COR No.	Certificate of Registration	Category
COR-2	Anglogold Ashanti Limited: Vaal River Operations	Mining and Mineral Processing
COR-3	Anglogold Ashanti Limited – West Wits Operations	Mining and Mineral Processing
COR-5	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (Tshepong, Matjhabeng and Bambani Operations)	Mining and Mineral Processing
COR-6	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (Joel operation)	Mining and Mineral Processing
COR-7	African Rainbow Minerals Gold Limited (Welkom Operations)	Mining and Mineral Processing
COR-10	Avgold Limited – Target Division	Mining and Mineral Processing
COR-11	Gravelotte Mines Limited	Mining and Mineral Processing
COR-13	MTC Demolition	Scrap Processor
COR-16	Nuclear Fuels Corporation of SA (Pty) Limited	Mining and Mineral Processing
COR-18	South Deep Join Venture	Mining and Mineral Processing
COR-20	Foskor Limited (Phalaborwa)	Mining and Mineral Processing
COR-22	Fer-Min-Ore (Pty) Limited (Zirtile Milling)	Mining and Mineral Processing
COR-23	Steenkampskaal Monazite Mine (Pty) Limited	Mining and Mineral Processing
COR-25	Eggerding SA (Pty) Limited	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-26	Richards Bay Iron and Titanium (Pty) Limited	Mining and Mineral Processing
COR-27	Foskor Limited (Richards Bay)	Fertiliser Manufacturer
COR-28	Randfontein Estates Limited-(Kusasaletheu)	Mining and Mineral Processing
COR-30	Mine Waste Solutions (Pty) Limited	Mining and Mineral Processing
COR-31	Ya-Rona Scrap Metals	Scrap Processor
COR-32	CJN Scrap	Scrap Processor
COR-33	Rampete Metal Processors (Pty) Ltd	Scrap Processor
COR-34	DMC Energy (Pty) Limited	Mining and Mineral Processing
COR-37	Harmony Gold Mining Company Limited (Free State Operations)	Mining and Mineral Processing
COR-38	Omnia Phosphates (Pty) Ltd	Fertiliser Manufacturer
COR-40	ARMgold/Harmony Freegold Joint Venture Company (Pty) Ltd (St Helena Operations)	Mining and Mineral Processing
COR-41	Blyvooruitzicht Gold Mining Company Limited	Mining and Mineral Processing
COR-43	Tronox KZN Sands	Mining and Mineral Processing
COR-47	Grootvlei Properties Mines Ltd	Mining and Mineral Processing
COR-48	DRDGOLD Limited	Mining and Mineral Processing
COR-50	Rappa Resources (Pty) Limited	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-51	Consolidated Modderfontein (Pty) Limited	Mining and Mineral Processing
COR-52	Nigel Gold Mining Company Limited	Mining and Mineral Processing
COR-53	East Rand Proprietary Mines Limited	Mining and Mineral Processing
COR-57	Crown Gold Recoveries Pty) Limited	Mining and Mineral Processing
COR-58	Harmony Gold Mining Company Limited – Randfontein Operations	Mining and Mineral Processing
COR-59	Industrial Zone Limited	Mining and Mineral Processing
COR-61	Sedex Minerals	Mining and Mineral Processing
COR-64	Potchefstroom Plastiek Herwinning BK	Scrap Processor
COR-66	Mintek	Small User
COR-69	Sibanye Gold Limited (Driefontein Operations)	Mining and Mineral Processing
COR-70	Sibanye Gold Limited (Kloof Operation)	Mining and Mineral Processing
COR-71	Sibanye Gold Limited (Beatrix Operation)	Mining and Mineral Processing
COR-76	Blastrite (Pty) Limited	Mining and Mineral Processing
COR-77	Anglo American Research Laboratories (Pty) Limited	Small User
COR-74	Durban Roodepoort Deep Mine	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-79	Durban Roodepoort Deep Limited	Mining and Mineral Processing
COR-80	Mogale Gold (Pty) Ltd	Mining and Mineral Processing
COR-81	Metrec	Mining and Mineral Processing
COR-84	The Big Bin CC	Scrap Processor
COR-86	Glenover Phosphate Limited (Mining Site) Operation)	Mining and Mineral Processing
COR-87	Rand Refinery Limited	Mining and Mineral Processing
COR-92	The Forensic Science Laboratory, SA Police	Small User
COR-95	Microzone Trading 69 cc	Scrap Processor
COR-97	Geratech Zirconium Beneficiation (Ltd)	Mining and Mineral Processing
COR-98	B G Scrap Metals (Pty) Ltd	Scrap Processor
COR-100	South African Airforce (SAAF),Department of Defence (DoD), RSA	Mining and Mineral Processing
COR-101	The Reclamation Group (Pty) Ltd (Richards Bay)	Scrap Processor
COR-103	Linbeck Metal Trading (Pty) Ltd	Scrap Processor
COR-104	South African Port Operations (Dry Bulk Terminal – Richards Bay, a Division of Transnet Limited)	Mining and Mineral Processing
COR-105	Tantilite Resources	Mining and Mineral Processing
COR-106	Mineral Sands Resources (Pty) Ltd	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-107	Vesuvius South Africa (Pty) Ltd	Mining and Mineral Processing
COR-109	SM Mining Construction (Pty) Ltd	Mining and Mineral Processing
COR-110	Geotron Systems (Pty) Limited	Small User
COR-111	Bosveld Phosphate	Fertiliser Manufacturer
COR-112	Scaw Metals Group	Scrap Processor
COR-114	Interwaste (Pty) Ltd	Scrap Processor
COR-115	Witswatersrand Consolidated Gold Resources Limited	Mining and Mineral Processing
COR-116	Business Venture Investment 1692 Proprietary Limited	Mining and Mineral Processing
COR-117	Vic Ramos CC	Scrap Processor
COR-118	GoldPlats Recovery Ltd	Mining and Mineral Processing
COR-119	Huntrex 196 (Pty) Ltd (trading as Ceracast)	Mining and Mineral Processing
COR-131	East Rand Beneficiation (Pty) Ltd	Mining and Mineral Processing
COR-132	Grifo Engineering (Pty) Ltd	Service Provider
COR-135	Tioxide SA (Pty) Ltd	Mining and Mineral Processing
COR-136	Thukela Refractories Isithebe (Pty) Ltd	Mining and Mineral Processing
COR-137	Manos Engineering (Pty) Ltd	Scrap Processor
COR-138	Bright Refining (Pty) Ltd	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-139	The New Reclamation Group (Westonaria operations)	Scrap Processor
COR-140	China African Precious Metals (PTY) Ltd	Mining and Mineral Processing
COR-141	Phalaborwa Copper (Pty) Ltd	Mining and Mineral Processing
COR-142	Pan African Resources - Evander Gold Mining	Mining and Mineral Processing
COR-143	Zirco Roode Heuwel	Mining and Mineral Processing
COR-144	Scamont Engineering (Pty) Ltd	Scrap Processor
COR-145	Re-Process Technology CC	Mining and Mineral Processing
COR-148	Saldanha Dry Bulk Terminal Cc	Service Provider
COR156	Necsa Calibration	Small User
COR-159	North West Reclaiming	Scrap Processor
COR-160	Shiva Uranium One	Mining and Mineral Processing
COR-164	Sulzer Pumps (SA) Limited	Service Provider
COR-165	Uramin Mago Lukisa	Mining and Mineral Processing
COR-167	Western Uranium (Pty) Ltd	Mining and Mineral Processing
COR-178	Durban Container Terminal – Business Unit of SA Port Operations	Mining and Mineral Processing
COR-180	SA Port Operations – Container Terminal Cape Town	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-181	Transnet Limited (SA Port Operations – Multipurpose Terminal, Saldanha bay)	Mining and Mineral Processing
COR-182	Buffelsfontein Gold Mine Limited	Mining and Mineral Processing
COR-183	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-184	HVH Gold (Pty) Limited	Mining and Mineral Processing
COR-186	AfriSam (Pty) Limited	Mining and Mineral Processing
COR-190	Ezulwini Mining Company Ltd	Mining and Mineral Processing
COR-194	Exxaro Resources	Mining and Mineral Processing
COR-195	Houlgon Uranium & Power (Pty) Ltd	Mining and Mineral Processing
COR-197	Gold Reef City Theme Park	Mining and Mineral Processing
COR-198	Set Point Industrial Technologies (Pty) Ltd (Isando)	Small User
COR-199	Uramin Mago Lukisa	Mining and Mineral Processing
COR-200	Uramin Mago Lukisa	Mining and Mineral Processing
COR-201	A&S Mining Supplies	Service Provider
COR-203	Cemo Pumps (Pty) Ltd	Service Provider
COR-204	Holgoun Energy (Pty) Ltd	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-206	Uranium One and Micawber 397 (Pty) Limited	Mining and Mineral Processing
COR-207	Set Point Industrial Technologies (Pty) Ltd (Mokopane)	Small User
COR-210	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-211	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-215	Margaret Water Company	Mining and Mineral Processing
COR-216	Paddy's Pad 1183 (Pty) Ltd	Mining and Mineral Processing
COR-217	Cango Caves Oudtshoorn Municipality	Mining and Mineral Processing
COR-218	Grindrod Terminals (Pty) Limited	Mining and Mineral Processing
COR-219	Southgold Exploration (Pty) Limited	Mining and Mineral Processing
COR-220	African Empowered Aggregates CC	Mining and Mineral Processing
COR-221	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-222	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-223	Tasman Pacific Minerals (Pty) Limited	Mining and Mineral Processing
COR-225	New Kleinfontein Goldmine (Pty) Limited	Mining and Mineral Processing

COR No.	Certificate of Registration	Category
COR-226	Rand Uranium (Pty) Limited	Mining and Mineral Processing
COR-227	WG Wearne Limited	Mining and Mineral Processing
COR-228	Ergo Mining (Pty) Limited	Mining and Mineral Processing
COR-229	The New Reclamation Group (Pty) Limited	Scrap Processor
COR-230	ALS Chemex South Africa (Pty) Limited	Small User
COR-232	Central Rand Gold South Africa (Pty) Limited (West)	Mining and Mineral Processing
COR-233	Central Rand Gold South Africa (Pty) Limited (East)	Mining and Mineral Processing
COR-234	Pamodzi Gold Orkney (Pty) Limited	Mining and Mineral Processing
COR-236	Reclaim Invest 101 (Pty) Limited	Scrap Processor
COR-238	Tronox (Namakwa Sands Operations)	Mining and Mineral Processing
COR-239	Aflease Gold Limited	Mining and Mineral Processing
COR-240	Tantus Trading 180 (Pty) Ltd	Mining and Mineral Processing
COR-242	Enviro Mzingazi Gypsum (Pty) Limited	Mining and Mineral Processing
COR-245	Namakwa Uranium (Pty) Limited	Mining and Mineral Processing
COR-246	NTP Logistics (Pty) Limited	Mining and Mineral Processing
COR-247	SGS South Africa (Pty) Ltd	Small User

COR No.	Certificate of Registration	Category
COR-248	Foskor Zirconia (Pty) Limited	Mining and Mineral Processing
COR-249	Pro Mass Transport (Pty) Ltd	Mining and Mineral Processing
COR-250	JCI Gold Limited	Mining and Mineral Processing
COR-252	Harmony Gold Mining Company Limited (South Operations)	Mining and Mineral Processing
COR-253	Avgold Limited (North Operations)	Mining and Mineral Processing
COR-254	WS Renovations Contractors	Service Provider
COR-255	Genalysis Laboratory Services (SA) (Pty) Limited	Small User
COR-256	Chifley Trading cc	Service provider
COR-257	Samco Investments (Pty) Limited	Scrap Processor
COR-258	SA Metal and Machinery Co (Pty) Limited	Scrap Processor
COR-259	University of Pretoria	Mining and Mineral Processing
COR-260	African Mineral Standards (a division of Set Point Industrial Technology (Pty) Ltd)	Small User
COR-261	North West University	Mining and Mineral Processing
COR-262	UIS Analytical Services (Pty) Ltd	Small User
COR-263	Aklin Carbide (Pty) Ltd	Service Provider

Table 22: Certificate of Registration Certificate of Registration and Caterogy

COE Number	Certification of Exemption
COE-1	Hydropower Mining
COE-2	Oranje Mynbou Vervoer – Kynoch Gypsum
COE-3	Kynoch Modderfontein
COE-4	Oranje Mynbou Vervoer – Stilfontein Waste Rock
COE-5	Klahari Gold Ridge Mining Company
COE-6	Neethling Plastics
COE-7	Glencore SA (Pty) Limited
COE-8	Necsa (Shipment of 5 Iso containers)
COE-9	Norcros SA (Pty) Limited
COE-10	Dino Properties
COE-11	South African Roll Company (Pty) Ltd
COE-12	The Maretself Property Trust
COE-13	CERACAST
COE-14	Landscape Architect Environmental Planner
COE-15	OSRAM
COE-16	JOSHCO
COE-17	Scientific Services
COE-18	Paterson and Cooke (Pty) Ltd
COE-19	University of Pretoria (Chemical Engineering Department of the)
COE-20	Denel SOC Ltd (T/A Denel Aviation)
COE-21	Huntrex 196 (Pty) Ltd T/A Ceracast

Table 23: Certificate of exemption

5.4 Regulation of nuclear power plants – Koeberg Nuclear Power Station (KNPS)

KNPS is currently the only nuclear power station in South Africa and on the African continent. It is located in Melkbosstrand on the West Coast of South Africa. Koeberg is owned and operated by South Africa's national electricity supplier Eskom. The two

nuclear reactors at the power station form the entirety of the South African Nuclear Power Generation Programme.

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. In accordance with the conditions of the licence, Koeberg is required to ensure that arrangements acceptable to the NNR are established and implemented with respect to the following aspects:

Plant Description and Configuration	Safety Assessment
Scope of Activities that may be undertaken	Controls and Limitations on Operation
Maintenance and in Service Inspection	Operational Radiation Protection
Effluent Management	Waste Management
Environmental Monitoring	Emergency Planning and Preparedness
Transport	Physical Security
Quality Management	Acceptance and Approval
Decommissioning	Organisational Change
Records Management and Reporting	Plant Modifications
Medical Surveillance	Radioactive Waste Management
Public Safety Information Forums	Financial Liability for Nuclear Damage
Inspection Programme to ensure Compliance with Conditions of Authorisation	

Table 24: Plant Description and Configuration Safety Assessment

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, NIL-01. 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.

5.4.1 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

Table 25: General Regulatory Dose Limits

The worker doses at KNPS during the reporting period were within regulatory limits. Radiation exposure of personnel working 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).

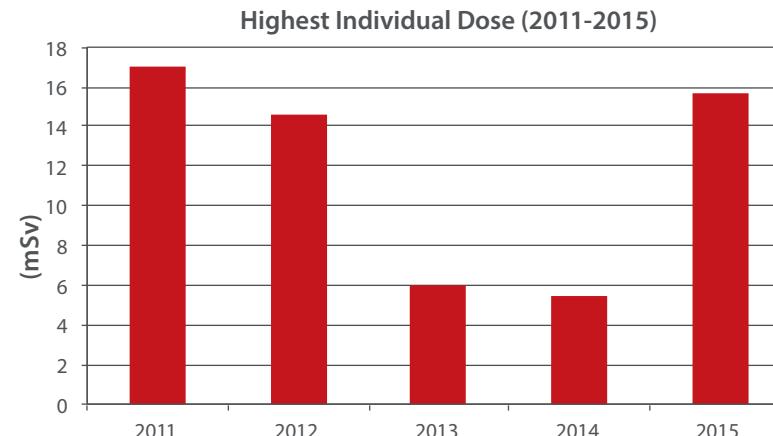


Figure 1: Highest Individual Occupational Exposure (2011-2015)

High doses in 2015 were attributed to high dose activities in Outages 121 and 221. The highest individual dose was 15.615 mSv for 2015 and was below the maximum effective dose of 50mSv as prescribed by the SSRP.

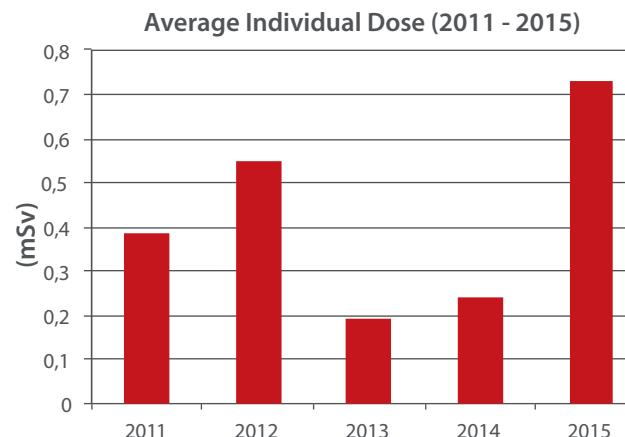


Figure 2: Average Individual Dose at Koeberg Nuclear Power Station (2011-2015)

The average individual dose between for 2011-2015 was below 20mSv per annum, averaged over five consecutive years as prescribed by the Safety Standards and Regulatory Practices (SSRP).

5.4.2 Projected public exposure to radiation

The regulatory annual effective dose limit prescribed by the NNR for members of the public from authorised actions is 1mSv. No action may be authorised which would give rise to any member of the public receiving a radiation dose from all authorised actions exceeding 1mSv in a year. There were no safety concerns regarding the safety of the public living around KNPS, during the period under review. In accordance with the conditions of the licence and the Regulations on Safety Standards and Regulatory Practices (SSRP), published as Regulation No. R388 dated 28 April 2006, the public doses resulting from effluent discharges from the 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 2015 calendar year.

5.4.3 Dose from effluent discharges during 2015

The projected public dose from effluent discharges for 2011-2015 are as shown in Figure 3 below.

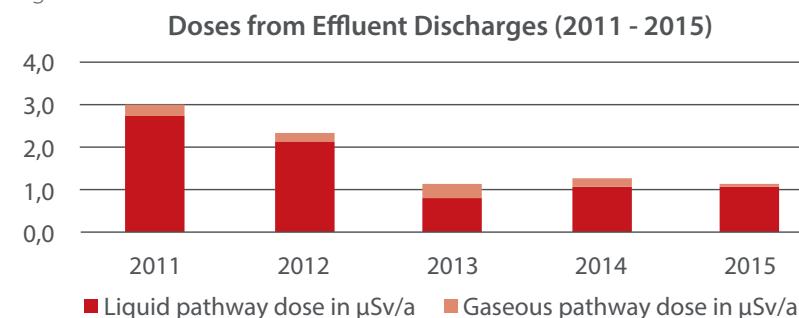


Figure 3: Projected Public dose from Effluent Discharges (2011-2015)

The public doses resulting from effluent discharges between 2011 and 2015 are below 250 µSv/a and comply with the dose constraints prescribed by the SSRP.

Month (2015)	Liquid pathway dose in µSv	Gaseous pathway dose in µSv	Total projected dose in µSv
Jan-Mar	1.610E-01	9.380E-03	1.704E-01
April-June	1.330E-01	5.700E-03	1.390E-01
July-September	4.552E-01	2.392E-02	4.791E-01
October- December	3.433E-01	2.060E-02	3.639E-01
Total cumulative dose for the calendar year (January to December 2015)		1.092E+00	5.960E-02
			1.152E+00

Table 26: Projected Public Dose from Effluent Discharges

5.4.4 Nuclear safety

The authorisation holder's commitment to safety of the plant and operations have been confirmed by the inspections carried out. Where it has been observed that areas of weakness have occurred, these have been addressed by proper investigation and the implementation of appropriate corrective actions. During the period under review, the

NNR focused its safety assessment activities primarily on the areas summarised below:

(i) Fukushima accident follow-up

Following the Fukushima accident in March 2011, the NNR established a task team and directed Eskom to re-assess the capability of KNPS to withstand external hazards, specifically regarding the following:

- Compliance to the current design basis for external events
- Stress tests (robustness against external events beyond the design basis)
- Adequacy of accident management and emergency planning

Eskom submitted a safety reassessment report to the NNR in December 2011. The scope of the reassessment covered the design basis (reactor and spent fuel storage) in terms of external events and combinations of events, as well as the robustness of the facility and cliff-edge effects for a similar scope of beyond design basis events. These include prolonged total loss of electrical power and ultimate heat sink. Measures or design features to mitigate these effects were identified. The scope included on-site and off-site aspects of accident management and emergency response.

To date, Eskom has submitted the second, third and fourth revisions of the post-Fukushima KNPS Reassessment. The NNR has continued to engage internationally on lessons learned from the Fukushima accident and its current position can be summarised as follows:

- i. The assessments and follow-up reviews conducted by Eskom conform to the NNR's directive and are in accordance with International Practice
- ii. The nuclear installations are adequately designed, maintained and operated to withstand all external events considered in the design base
- iii. There were no findings to warrant curtailing operations, or to question the design margins of these facilities
- iv. The safety reassessments identified a number of potential improvements to further reduce the risk of accidents, less probable than those covered in the design basis
- v. The NNR continued to improve the Safety Standards and Regulatory Practices, which is addressed as part of the NNR's Regulatory Framework Project

(ii) Steam Generator Replacement (SGR)

During the year under review, the manufacturing Steam Generators (SGs), was progressed at various facilities with most of the components being delivered to SENPEC in China for their final assembly. The NNR commenced with the process of procuring

the services of an Authorised Inspection Agency (AIA) to monitor the manufacturing compliance with NNR requirements.

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

(iii) Refuelling water storage tank (PTR) replacement

During the year, work progressed with manufacturing the replacement PTR tanks for both units. Completion is scheduled for later in 2016

(iv) Strategy for long-term operation (LTO) project

KNPS will reach 40 years of operation in 10 years' time. Development of a Long-Term Operation (LTO) Strategy continues in line with the IAEA guidance on Long-Term Operation which contains three distinct aspects:

- Identify the large component and system replacements that have to be implemented if Koeberg is to be operated beyond 40 years
- Implement a comprehensive aging management programme to manage all aging mechanisms for safety relevant equipment
- Update all time limiting analysis and calculations to demonstrate anticipated safe operation beyond 40 years

The LTO project will focus on Ageing Management and Actual Condition of the SSC's importance to safety. The IAEA is supporting the NNR and Eskom to ensure that all gaps are identified in the strategy and that personnel are informed about their roles in the assessment. During the reporting period, the NNR hosted an IAEA expert mission to assist the NNR with the strategy to address Safety Aspects of Long-term Operation (SALTO), Ageing Management and Periodic Safety Reviews.

(v) Spent fuel dry storage

In anticipation of the LTO, adequate capacity to provide for storage of all spent fuel generated during the extended operational phase will need to be required. Eskom submitted reports for the Licensing Strategies for storage of spent fuel for review to the NNR.

(vi) Structural integrity and containment structures

Adequate structural capacities/safety margins will need to be demonstrated to ensure safe operations during the extended operational phase. Information has been exchanged between NNR and Eskom pertaining to concerns raised by the NNR, relating to the condition of the containment structures at KNPS.

5.4.5 Competency and sufficiency of the operator workforce to work safely

The overall staffing and competency levels required for performing nuclear safety related to work at Koeberg were found to be satisfactory, during the reporting period.

5.4.6 Transport safety

During a Radwaste Audit at Koeberg, it was identified that the concrete drums caps did not meet the strength acceptance criteria. Shipments of concrete drums were thereafter stopped, pending requalification tests aimed at granting approval for the further shipment of concrete drums. Steel drums are still being shipped to Vaalputs.

5.4.7 Radioactive waste safety

The NNR performed pre-shipment inspections on the radioactive waste packages transported to Vaalputs. These inspections were performed to verify that initiatives implemented, following the previous suspension of radioactive waste packages, were effective in ensuring compliance. The operator demonstrated commitment to ensuring the safety of radioactive waste, both in storage and during transportation.

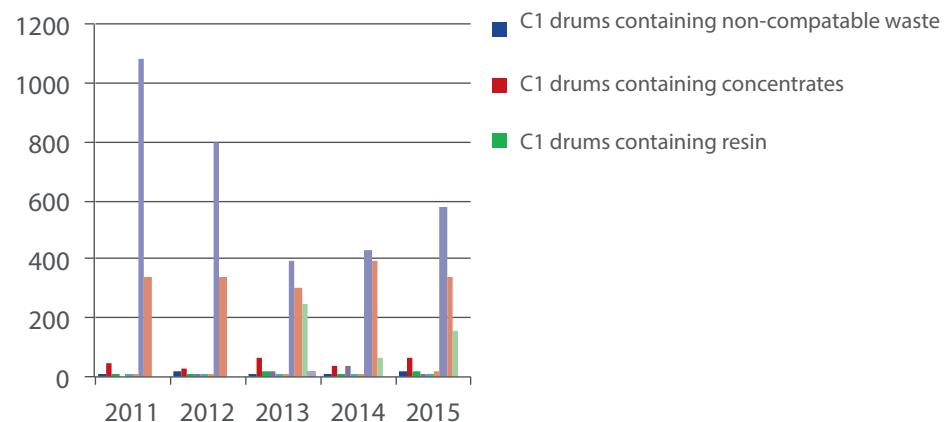


Figure 4: Inventory of solid radioactive waste produced and drummed from 2011-2015.

40 Concrete and 1 080 Steel drums were sent to Vaalputs in 2015. The receiving and disposal of radioactive waste at Vaalputs was in conformance with the conditions of authorisation.

5.4.8 Environmental protection

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

5.4.9 Nuclear emergency planning and preparedness

There were no safety concerns regarding nuclear emergency planning and preparedness during the review period. The 2014 exercise report, contained issues for correction by KNPS and the City of Cape Town (Disaster Operations Centre). 27 out of 40 non-compliances and observations have been acceptably corrected and 13 are still outstanding.

5.4.10 Physical security

There were no concerns with respect to physical security at KNPS during the period under review. Both the NNR and the national key points' security functionaries monitor the physical security requirements at KNPS. As part of its Compliance Assurance Programme, the NNR conducts regular inspections at Koeberg to verify conformance to licensing requirements pertaining to physical security. The inspections conducted indicated compliance with the regulatory requirements. The NNR is a member of the security Joint Planning Committee (JPC) and participates in the security projects initiated.

5.4.11 Safety of sealed radioactive source

The safety of sealed radioactive sources, on the premises of the authorisation holders falls under the jurisdiction of the NNR, and this is included in the Compliance Assurance Programme. The inspection of sealed radioactive sources at the KNPS indicated that the radioactive sources were controlled in accordance with the regulatory requirements. No anomalies were detected by the routine compliance assurance inspections conducted. No safety concerns were raised with regard to the safety of the sealed radioactive sources during the review period.

5.4.12 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 Koeberg relating to events/occurrences.

The NNR monitors events /occurrences at Koeberg in the following manner:

- Audits conducted on the Eskom processes relating to occurrences (i.e. plant monitoring, reporting, follow-up and close-out)
- Monitoring of the implementation of these processes
- Quarterly meetings between Eskom and the NNR at which experience feedback is discussed

- Review of Eskom reports on experience feedback and safety performance indicators, which reflect occurrences and trends
- Direct assessment of selected significant occurrences

5.4.13 Regulatory compliance inspections

In order to verify the degree of compliance with the conditions of authorisation, the NNR undertakes independent inspections and audits. The NNR conducted 72 inspections and two audits at the Koeberg Nuclear Power Station as part of its compliance assurance activities for 2015.

5.4.14 Regulatory warnings and directives to stop work

Three directives were sent to Koeberg Power Station in 2015. Corrective action plans were submitted by Koeberg Nuclear Power Station to the NNR.

5.4.15 Appeals to the Chief Executive Officer

No appeals were lodged with the Chief Executive Officer during the review period.

5.5 Regulation of nuclear facilities and activities on the NECSA Pelindaba site

Established as a public company in terms of the Nuclear Energy Act, (Act No. 46 of 1999), 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 accordance with the conditions of its licence, Necsa is required to ensure that compliance, acceptable to the NNR, were established and implemented during the period under review.

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

- The SAFARI-1 Research Reactor
- Various fuel cycle facilities involved in the manufacture of nuclear fuel for the SAFA-RI-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 licence, 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	Safety Assessment
Scope of Activities that may be undertaken	Controls and Limitations on Operations
Maintenance and in Service Inspection	Operational Radiation Protection
Effluent Management	Waste Management
Environmental Monitoring	Emergency Planning and Preparedness
Transport	Physical Security
Quality Management	Acceptance and Approval
Decommissioning	Organisational Change
Records Management and Reporting	Plant Modifications
Medical Surveillance	Radioactive Waste Management
Public Safety Information Forums	Financial Liability for Nuclear Damage
Holder Inspection Programme to ensure Compliance to Conditions of Authorisation	

Table 27: Conditions of licence for Necsa

5.5.1 Occupational exposure to radiation

The worker doses at the Pelindaba site over the period under review were within regulatory limits. Radiation exposure of personnel working 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 As Low As Reasonably Achievable (ALARA). The occupational exposure of workers on the Pelindaba site was within the NNR regulatory requirements.

General Regulatory Dose Limits prescribed by the NNR	
Workforce	Regulatory Criteria
Maximum individual worker dose	A (maximum) effective dose of 50mSv in any single year
Average individual worker dose	20mSv per annum averages over 5 consecutive years. Controlled by application of the ALARA principle. The ALARA target for the annual dose is 4mSv

Table 28: Pelindaba - General Regulatory Dose Limits prescribed by the NNR

The average effective doses for occupationally exposed persons were within regulatory limits.

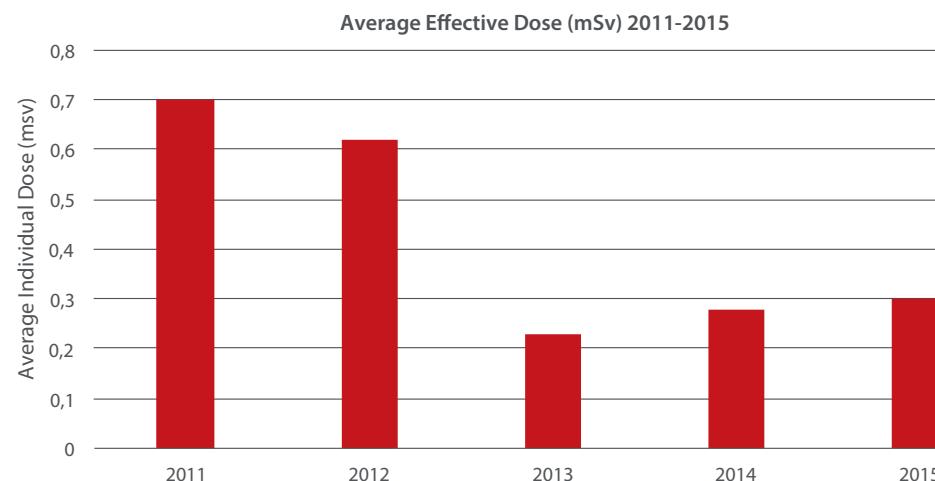


Figure 5: The average effective dose Necsa Pelindaba Site (2011-2015)

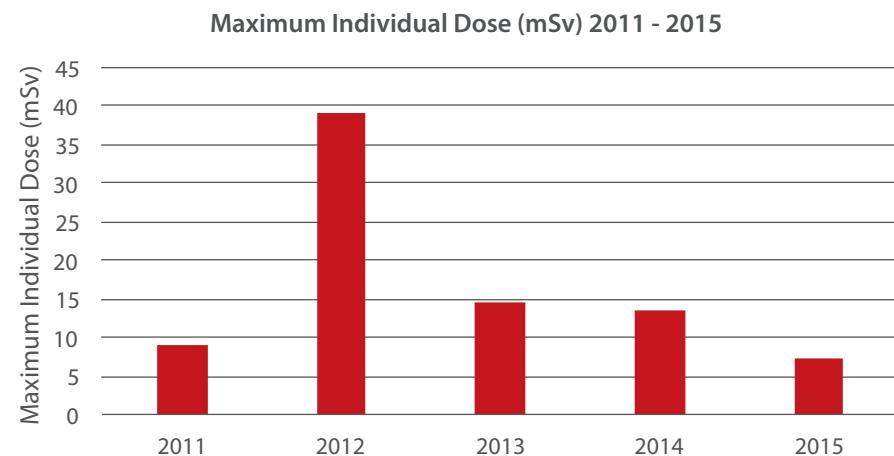


Figure 6: Maximum individual dose Necsa Pelindaba Site 2011-2015

5.5.2 Projected public exposure

Conditions of licence and the Regulations on Safety Standards and Regulatory Practices published as Regulation No. R388, dated 28 April 2006, require that public doses

resulting from effluent discharges from the Necsa 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 and the projected public doses, resulting from the liquid and gaseous effluent releases during the past five years is as shown in the table below:

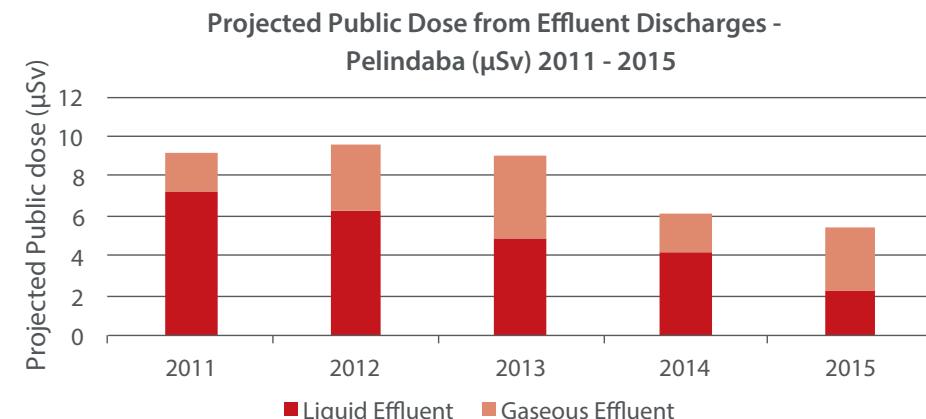


Figure 7: Projected public exposure of liquid and gaseous pathways for Necsa Pelindaba site 2011-2015

5.5.3 Nuclear safety

(i) SAFARI-1 Ageing Management

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

- Ageing Management Plan for the SAFARI-1 Research Reactor

- Master Management Plan for Ageing Management at the SAFARI-1 Research Reactor
- SAFARI-1 Gamma Safety Channel System Upgrade
- Neutron Control Channel Refurbishment
- Area Monitoring System Upgrade
- Gamma Flux Monitoring System Replacement
- Replacement of the reactor grid plate
- Rod drop monitoring upgrade
- Automatic flux controller replacement

(ii) Modifications identified as part of the Fukushima reassessment

The initial safety reassessment of SAFARI-1 in light of Fukushima Daiichi nuclear accident identified a number of improvement actions and recommendations relating to plant modifications, severe accident management procedures and suitability and compatibility of emergency response equipment. Necsa was required to undertake more detailed reassessment of these issues and to submit these assessments to the NNR.

During the review period, the NNR reviewed and commented on Necsa submissions related to the following SAFARI-1 safety systems:

- Second shut down system
- Seismic trip
- Stabilisation of the fresh fuel vault
- Re-flood nozzle
- Emergency water return system
- Portable external plug-in power supply

(iii) 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 SARs, related to the following nuclear facilities on the Pelindaba site:

- Machining and dismantling of radiography projectors and transport containers containing depleted Uranium in the UMET facility (Building P-2600)
- The Volume Reduction Facility in Pelstore
- The Area 21 Storage Facility
- Operation of Cell 20 in the NTP Radiochemicals Complex (Building P-1701)
- The P-1600 Radiological Laboratories
- Capping of Calcium Fluoride Ponds 3 and 4 on Thabana
- Decontamination of Cell 11 in the NTP Radiochemicals Complex (Building P-1701)
Uranium residue project (Cell 2) in the NTP Radiochemicals Complex (Building P-1701)
- Refurbishment of Cell 19 in the NTP Radiochemicals Complex (Building P-1701)
- Pelindaba East Bus Shed Waste storage facility

(iv) Review of Operating Technical Specifications (OTS)

The Operating Technical Specifications 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 has reviewed and commented on the OTS for the following facilities on the Necsa Pelindaba site, during the reporting period:

- Wet and dry decontamination facilities in A-Building
- Building P-2500 (ELPROD)
- Pelstore
- Pelindaba East Bus Shed waste storage facility

- Building P-2600 (UMET)
- Pelindaba East Evaporation Pond Complex (Ponds 1-5)
- Pelindaba East Evaporation Pond Complex (Pond 6)
- The Volume Reduction Facility in Pelstore
- The Area 21 Storage Facility
- Operation of Cell 20 in the NTP Radiochemicals Complex (Building P-1701)
- The P-1600 Radiological Laboratories

5.5.4 Transport safety

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

The conditions of licence require that the transportation of radioactive material or any equipment or objects contaminated with radioactive material must be carried out in compliance with the relevant provisions of the International Atomic Energy Agency's Regulations for the Safe Transport of Radioactive Material, 2005 Edition, IAEA Safety Standard Series No. TS-R-1, IAEA in Vienna, 2005.

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
- Transportation of irradiated nuclear fuel from SAFARI-1 Research Reactor to the Thabana Pipe Store

Certificates of package design approval for transport containers

In accordance with the provisions of section 7 of the National Nuclear Regulator Act, (Act No. 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, during the period under review, the NNR 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's Safety Standards Series No. TS-R-1, Regulations for the Safe Transport of Radioactive Material, 2005 Edition, Vienna, 2005.

Certificate Number	Transport Container	Effective Date	Expiry Date
ZA/NNR 1006/B(U)-96 (Rev 04)	1006 Cobalt Transport Flask	02 July 2015	01 July 2020
ZA/NNR 1003/B(M) – 96 (Rev 03)	1003 Cobalt Transport Flask	24 February 2016	23 February 2021

Table 29: Certificates of package design

5.5.5 Radioactive waste safety

There were no safety concerns regarding radioactive waste management on the Pelindaba site of Necsa during the period under review. In accordance with the conditions of the licence, Necsa is obliged to:

- Establish and implement arrangements for the minimisation and safe management of radioactive waste on the site
- Establish, implement and maintain a radioactive waste management programme for each facility on the site

- Ensure the identification, quantification, characterisation and classification of any radioactive waste generated
- Provide for the necessary steps leading to safe clearance, authorised discharge, disposal, re-use or recycling
- Provide for the safe storage of radioactive waste between any waste management processes

Modification to Cells 1 and 2 in the NTP Radiochemical Complex

As part of radioactive waste management improvement and rationalisation project within the NTP Radiochemical Complex (Hot Cell Complex) on the Necsa Pelindaba site, Necsa had previously requested approval for modification of the utilisation of Cell 1 and 2 in the facility. Necsa proposed to use:

- Cell 1 as an interim store for the storage of uranium residue from the Mo-99 and I-131 radiopharmaceutical manufacture processes
- Cell 2 as an interim decay store for low density radioactive wastes and spent resin columns originating from the radiopharmaceutical manufacture processes in the facility

During the reporting period, the NNR monitored the implementation of the modification of Cells 1 and 2 in the NTP Radiochemical Complex.

Volume Reduction Plant In Pelstore

The volume reduction plant was originally installed in the Necsa Effluent Treatment Facility in Building P-2400. Following a request by Necsa, the NNR had previously granted approval for the dismantling of the plant and reinstallation in the Pelstore, which is the centralised drum storage facility on the Necsa Pelindaba site.

During the reporting period, the NNR monitored the installation and cold commissioning activities in the Pelstore.

5.5.6 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 Hartbeespoort Dam

There were no concerns regarding safety to the environment around Pelindaba in the review period.

5.5.7 Regulatory independent verification of radiological environmental analysis

The NNR conducts 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.

5.5.8 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 09 September 2015.

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

- a. Communication between onsite and offsite emergency response organisations
- b. Protection of emergency workers, both on-site and off-site
- c. Physical evacuation of workers
- d. Provision of transport for evacuees

- e. Activation and operation of the Mass Care Centre (MCC), including required resources
- f. Arrangements to provide for the evacuees at MCC
- g. 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 continued to monitor the Necsa improvement actions which will be tested during the next regulatory emergency exercise at the Pelindaba site.

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

In addition to the requirements in the SSRP, the conditions of licence require that Necsa must establish and implement arrangements to ensure that 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 is satisfied that Necsa complied with the above requirements during the period under review. However, the sufficiency of staff employed in the areas of safety development and compliance monitoring remains an area of concern for the NNR.

5.5.10 Physical Security

There were no concerns with respect to 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 during the review period. In accordance with the conditions of licence,

5.5.11 Nuclear incidents/accidents reported

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

5.5.12 Regulatory compliance inspections

NNR conducted 146 planned and 1 unplanned compliance inspections at Necsa's Pelindaba site during the 2015/2016 financial year. The majority of these inspections revealed satisfactory compliance with NNR regulations.

Audits

Four planned audits were conducted during the review period. Some minor deviations from compliance were addressed.

Regulatory investigations

There were no investigations conducted during the review period.

Nuclear event

There were no nuclear events of concern reported during the review period.

5.5.13 Regulatory warnings or directives to stop work

The NNR directed Necsa to stop operations at the B1 Basement – Building Basement (NIL 42), a facility carrying out decommissioning activities during this financial year. This was due to violations of the licence condition related to implementation of a worker radiation protection programme.

5.5.14 Appeals to the Chief Executive Officer or the Board

There were no appeals lodged against the NNR during the reporting period.

5.6 Regulation of 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. Vaalputs is currently authorised (Nuclear Installation Licence NIL-28), for the receipt and shallow land disposal of solid low level waste originating from Koeberg Nuclear Power Station (KNPS) and the South African Nuclear Energy Corporation.

The operational phase commenced in November 1986 and under the current nuclear programme, is estimated to extend for 50 years up to 2036, which is also the estimated end of the operational period for the KNPS.

5.6.1 Occupational exposure to radiation

The worker doses at Vaalputs over the period under review were within regulatory limits. Radiation exposure of personnel working at Vaalputs 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 As Low As Reasonably Achievable (ALARA). Vaalputs demonstrated control over occupational exposure of the workers, in line with the NNR requirements.

The average effective doses for occupationally exposed persons demonstrated that Vaalputs was in compliance with the dose limitation system for individual workers over the review period. The cumulative dose accrued for an individual during the 2015 calendar year, can be found in the tables below:

Average Individual Dose (mSv) 2011-2015

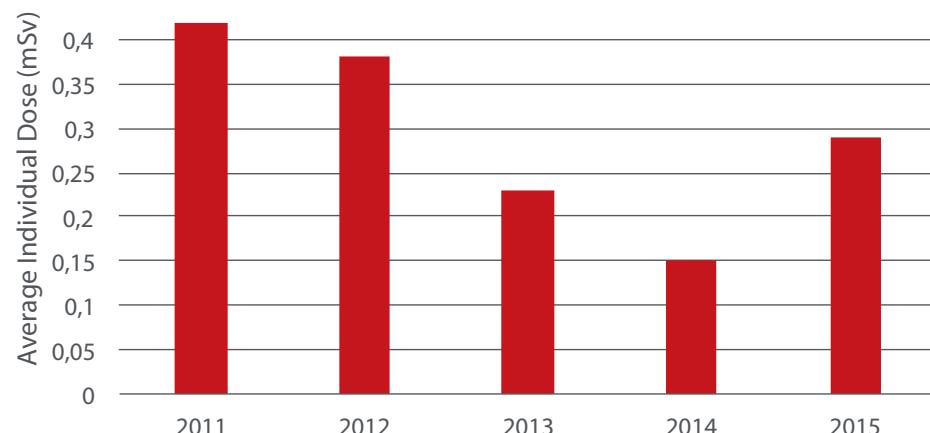


Figure 8: Average Effective Dose Necsa Vaalputs Site (2011-2015)

Maximum Individual Dose (mSv) 2011-2015

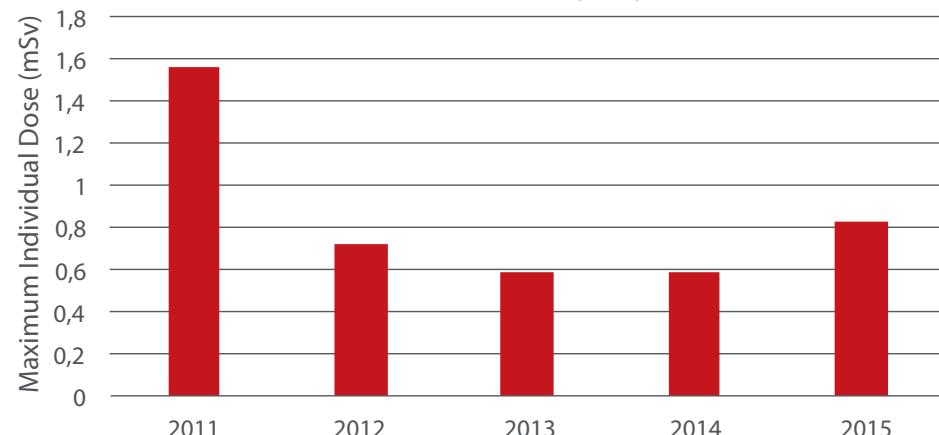


Figure 9: Maximum Individual Dose Necsa Vaalputs site (2011-2015)

5.6.2 Projected public exposure to radiation

There were no safety concerns regarding public exposure to radiation. In accordance with the conditions of licence and the Regulations on Safety Standards and Regulatory Practices (SSRP), published as Regulation No. R388 dated 28 April 2006, 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.

5.6.3 Nuclear safety

During the review period, the NNR completed reviews and commented on the following Vaalputs' safety case documentation:

- Vaalputs meteorological programme
- Vaalputs Waste Acceptance Criteria
- Vaalputs Safety Assessment Report
- Vaalputs Operational Technical specifications
- Vaalputs Emergency Plan

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

In addition to the requirements in the SSRP, the conditions of licence require that Necsa establish and implement arrangements to ensure that 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 remained satisfied that Necsa complied with the above requirement during the review period. The NNR, however, does have some concern regarding sufficiency of the Vaalputs radiation protection staff.

5.6.5 Transport safety

Transport of waste to the Vaalputs site is the responsibility of the waste generator and is regulated by the NNR. The Vaalputs waste acceptance criteria require that such transport be performed in compliance with the relevant provisions of the IAEA regulations for the safe transport of radioactive material. There were no safety concerns regarding the transport safety at Vaalputs, during the period under review.

5.6.6 Radioactive waste safety

Vaalputs received 120 concrete drums, 415 (100 litre) metal drums from Pelindaba and 1 440 metal drums from KNPS for disposal during the calendar year 2015. See table 24, the receipt and disposal of radioactive waste at Vaalputs were in conformance with the conditions of authorisation.

Waste	Type of waste package		
Generator	Concrete	Metal	Other
Koeberg	0	1440	0
Necsa	120	415	0

Table 30: Metal drums received by Vaalputs

Trench	Number of waste Packages	Total activity as on 31 December 2015	
		Received	Decayed
A01	1 174	1.92E+05	3.54E04
A02	840	4.07E+02	5.04E01
A03	1 639	8.53E+02	4.13E02
A04	1 079	6.99E+02	3.52E02
A05	1 680	2.22E03	1.58E03
A06	1 829	1.93E03	1.69E03
A07	569	3.21E01	2.96E01
B01	3 177	1.02E+05	2.13E04
B02	400	1.87E+04	1.24E04
B03	391	1.45E04	1.18E04
B04	23	7.14E+03	5.96E03
TOTAL	23 367	3.40E05	9.10E4

Table 31: Total Activity as on 31 December 2015

5.6.7 Environmental protection

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

5.6.8 Nuclear emergency planning and preparedness

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

5.6.9 Physical security

There were no safety concerns relating to physical security at Vaalputs, during the period under review.

5.6.10 Safety of sealed radioactive sources

There were no irregularities relating to sealed radioactive sources at Vaalputs, during the period under review.

5.6.11 Nuclear incident/accidents reported

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

5.6.12 Regulatory compliance inspections

During the review period, three inspections were conducted and the last one was replaced with an audit. All inspections showed acceptable compliance with conditions of authorisation and regulations.

5.6.13 Regulatory warnings or directives to stop work

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

5.6.14 Appeals to the Chief Executive Officer or the Board

There were no appeals concerning Vaalputs, during the review period.

5.7 Regulation of Naturally Occurring Radioactive Material (NORM)

Natural resources that are extracted from the ground, such as coal, oil, gold, natural gas and other mineral ores, contain various amounts of natural radioactivity. When these resources are extracted and processed, their natural state can be modified, which may result in the enhancement of the natural radioactivity content originally present. Such enhancements may be observed in the residues or the waste generated and/or in the products or by-products and are sometimes high enough to pose a risk to both humans and the environment, if they are not adequately controlled.

In terms of the National Nuclear Regulator Act (Act no. 47 of 1999), the NNR is responsible for exercising regulatory control over facilities handling NORM. Facilities

and activities which handle NORM require a nuclear authorisation in terms of this Act. In terms of section 22(1) of the NNR Act, such facilities are authorised by means of a Certificate of Registration (COR), or a nuclear authorisation 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 at these various authorisation holders to ensure compliance to the conditions of authorisation and the applicable Safety Standards and Regulatory Practises R388.

The NNR continues to grant nuclear authorisations for the following categories:

- 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 (i.e. ferrous and non-ferrous metal, plastic, stainless steel, etc.), that is contaminated by NORM
- Laboratories conducting tests of small quantities of NORM samples for verification of proposed and existing actions, including samples from prospecting activities
- Some service providers are authorised for the cleanup of radiologically contaminated sites

5.7.1 Occupational exposure to radiation

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

General Regulatory Dose Limits prescribed by the SSRP	
Workforce	Regulatory criteria
Maximum individual worker dose	An (average) effective dose of 20mSv per annum averaged over five consecutive effective years and (maximum) effective dose of 50mSv in any single year

Table 32: General Regulatory Dose Limits prescribed by the SSRP

These limits require the holder to have proper dose records of all occupational exposed personnel for a rolling five years, as determined by the SSRP (R388).

Figure 10 demonstrates improvement in exposure levels for the current reporting period compared with the previous period for the areas where the potential for the annual dose limit to be exceeded is very low, commonly known as non-special case mines. The radiological exposure levels for 2015 in the non-special case mines are below 10 mSv for the first time in the past four consecutive years. The figure also indicates the number of occupationally exposed personnel per dose range (in mSv) annually over the past five consecutive years. It can be concluded that there has been compliance with the annual dose limit.

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. Figure 10 demonstrates that no exposures of more than 20 mSv per annum were recorded for 2015, an improvement from 2014. The figure also indicates the number of occupationally exposed personnel per dose range of dose (in mSv) over the past five consecutive years.

Figure 11 demonstrates that the (average) effective dose averaged over the past five consecutive years has not exceeded 20 mSv (average) or total of 100 mSv over the five consecutive years in the special case mines.

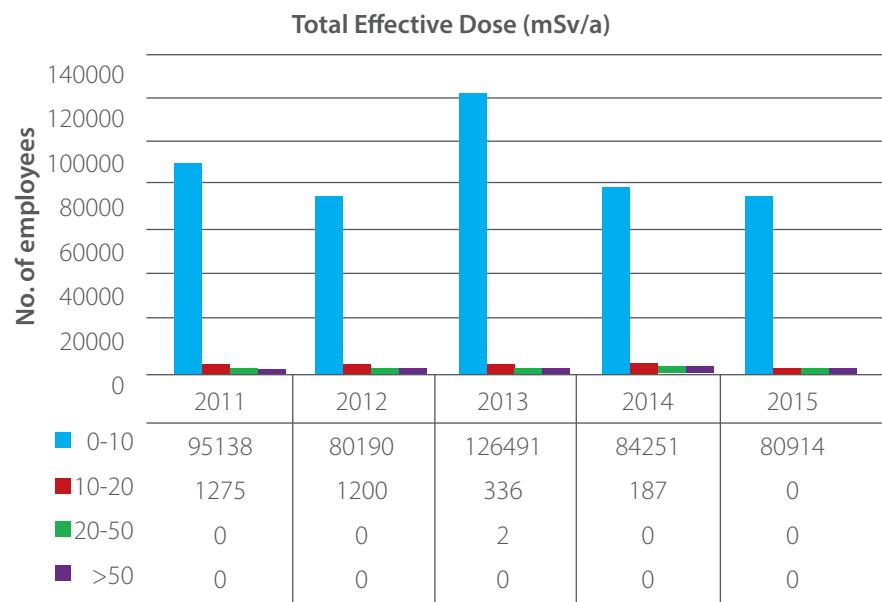


Figure 10: Total effective dose summary for non-special case mines over past five consecutive years

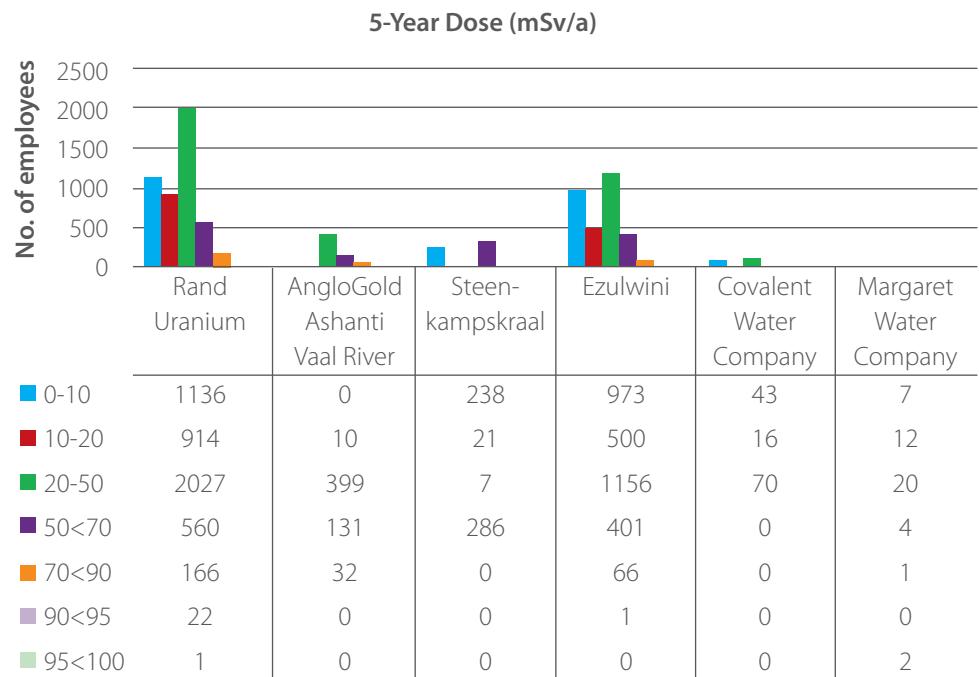


Figure 11: Five consecutive years' accumulative doses for SCMs i.e. 2011-2015

5.7.2 Special Case Mines (SCM)

For a mine to be classified as a special case by the NNR, the potential monthly dose must be 1.7 mSv and above, or the projected annual dose of 20 mSv should be exceeded. During the period under review, the NNR noted a slight improvement in observed worker doses, which can be attributed to the compliance assurance measures enforced by the NNR on the holders.



Figure 12: Total annual dose summary for SCMs for the year 2015

5.7.3 Public exposure to radiation

In accordance with the Regulations on Safety Standards and Regulatory Practices, Regulation No. R388, dated 28 April 2006 (SSRP), the doses for members of the public must comply with the action specific dose constraint and a limit of 1 mSva-1 from all authorised actions. The NNR further requires the holders to submit the Public Safety Assessments (PSAs), to ensure that the authorised actions do not pose any undue health risks to members of the public. These documents have been reviewed by the NNR. The projected public exposures from authorised actions were all within the public dose limit.

5.7.4 Transport safety

There were no major safety concerns related to transport during the period under review. There have been incidents of detection of radioactively contaminated scrap material and radiation sources with the scrap material by unauthorised facilities.

These incidents were reported, investigated by the NNR and action taken to ensure the safety and security of the material. Some of the actions taken include diverting the scrap consignment to the authorised scrap smelter, to authorised holders for decontamination and disposal or interim storage. Routine transport of low specific activity (LSA-1) scrap materials takes place on a daily basis.

5.7.5 Radioactive waste safety

There was no major safety concern related to radioactive waste safety during the period under review.

Authorisation holders are 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 main aspects of a typical radioactive waste management procedure includes:

- Identification of radioactive waste and its sources
- Segregation of radioactive waste into process and non-process waste
- Categorisation of process waste into homogeneous and non-homogeneous waste
- Radioactive waste management options
- Record keeping and reporting
- Quality assurance

Routine and annual waste management reports were submitted to the NNR, summarising and interpreting the above programme and demonstrating compliance with the NNR requirements. The summary of waste is presented below.

Total	Quantities	No. of consignments
Unrestricted Scrap (tons)	1.57E+06	5906
Restricted Scrap (tons)	1.06E+06	6430
Gaseous Releases (m ³ /year)	2.85E+11	N/A
Liquid Waste (m ³ /year)	1.31E+11	N/A

Total	Quantities	No. of consignments
Semi Solid (tons)	8.91E+07	N/A
Solids (tons)	2.62E+07	3 8408
Other Waste (tons)	2.39E+06	4 599

Table 33: Radioactive waste safety

5.7.6 Nuclear emergency planning and preparedness

The NNR requires that an emergency and preparedness plan be established to make provision for any occurrence involving radioactive material which has the potential to give rise to unplanned exposure to radiation in excess of the respective annual dose limits for workers, visitors to the site or the public.

5.7.7 Physical security

As part of the conditions of a nuclear authorisation, the holders of a nuclear authorisation are required to establish, implement and maintain a physical security system that is approved by the NNR. Such a system would prevent, as far as reasonably possible, unauthorised access to areas containing radioactive material and would also prevent the unauthorised removal, diversion or theft of such material. In general, the holders demonstrated compliance with the physical security requirements.

5.7.8 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 the radioactive sealed sources fall within the jurisdiction of the Directorate Radiation Control, under the Department of Health.

5.7.9 Nuclear events reported

Although there were no nuclear accidents or incidents reported for the period under review, the following occurrences were registered:

a. Occurrence: On 12 May 2015, it was established during NNR inspection that Mineral Sands Resources (COR-106) had stored potentially radioactive material (Garnet) outside the authorised scope.

Outcome: The NNR took samples of Garnet for radioanalysis at an accredited laboratory and the results revealed that the radioactivity concentration of this material is below the exclusion level of 0.5 Bq/g.

b. Occurrence: On 13 May 2015, intruders were identified at South Uranium Plant of AngloGold Ashanti (Vaal River Operations) and holder of COR-2, through the security surveillance system. The intruders cut off the electrical wires around the fence and fled the site upon the response of the reaction unit.

Outcome: There was no theft of radioactive material and the security measures have been restored.

c. Occurrence: On 12 June 2015, a road accident occurred on N7 during the transportation of zircon from Mineral Sands Resources (COR-106) to Cape Town. The trailer was unhooked from its horse and came to an abrupt stop, leading to two bags of zircon being spilled on the road.

Outcome: The area was cleaned, surveyed by the holder and confirmatory survey was carried out by the NNR to close the occurrence. The holder has introduced a lock system to ensure that this does not recur and the drivers are expected to verify this aspect as part of routine inspections that are carried out prior to leaving the site.

d. Occurrence: On 1 August 2015, pipeline failure resulting in the minor spillage of residue material into the surrounding environment occurred at Mine Waste Solutions (COR-30). Most of the residue material was contained within the bund walls.

Outcome: The NNR conducted a confirmatory survey and noted some hotspots that require further rehabilitation by the holder. Confirmatory survey will be conducted once the cleanup is completed and a survey report submitted by the holder.

e. Occurrence: On 11 September 2015, the NNR established, during an inspection, that Rand Uranium (COR-226) did not move a worker who had reached the action level for relocation to low dose rate areas.

Outcome: The worker was moved to low dose rate area on the basis of exceeding the action level, however, the dose limit was not exceeded.

f. Occurrence: On 7 October 2015, the pipeline failure occurred at Mogale Gold (Pty) Ltd (COR-80) resulting in the spillage of residue material into the surrounding environment.

Outcome: The affected area was rehabilitated and the NNR performed a confirmatory survey to close the occurrence.

g. Occurrence: On 25 October 2015, a pipeline flange failure occurred at Mine Waste Solutions (COR-30) resulting in residue flowing into the surrounding environment and property of Midvaal Water Company.

Outcome: Most of the areas have been rehabilitated with permission only received recently from Eskom for rehabilitation of the areas beneath the powerlines.

5.8 Regulatory Compliance

In order to verify the degree of compliance with the conditions of nuclear authorisation, the NNR undertakes independent inspections and audits at authorised facilities. A total of 181 inspections were conducted during the reporting period. These inspections were conducted to verify the degree of compliance with the various programmes and procedures implemented by the holders. Holders were required to investigate the reasons for, and implement corrective actions related to all non-compliances identified. A total of 16 audits were conducted at various mining facilities, to ascertain the degree to which these mines were implementing quality management systems. The audit findings concluded that some of the holders were deficient in terms of the requirements related to quality management systems. The holders 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 next reporting period.

Environmental verification samples

There were 370 environmental samples taken around the holders of CORs for verification, the samples were taken to Nesca's SANAS accredited laboratory for analysis.

5.8.1 Regulatory warnings and directives issued

The following regulatory warnings and directives were issued to holders of nuclear authorisations:

a. Directive issued: On 11 January 2016, a directive was issued to Gravelotte Mines Limited (COR-11) for failure to comply with the conditions of authorisation by not submitting the required operational procedures. The holder failed to comply within prescribed timeframes, leading to the NNR directing the holder to cease operations until compliance is demonstrated.

Outcome: The holder has addressed the critical issues that were raised, leading to the conditional lifting of the directive by the NNR.

b. Directive issued: On 11 January 2016, a directive was issued to Skyprop (Unauthorised site) in Potchefstroom, for handling radioactive material without a nuclear authorisation.

Outcome: The facility has ceased operations as directed and moved all contaminated material onto the authorized site (COR-64). The facility is to conduct safety assessments at their site and submit to the NNR to demonstrate that the site is free from radiological contamination.

c. Directive issued: On 5 February 2016, a directive was issued to Potchefstroom Plastiek Herwinning CC (COR-64), to address the repeated non-compliances within a prescribed period. The holder failed to comply, leading to another directive issued on 16 March 2016, instructing the holder to cease operations.

Outcome: The holder has complied with the directives and operations have resumed.

- d. Directive issued: On 15 February 2016, a directive was issued to The New Reclamation Group (Pty) Limited (COR-101) in Richards Bay, to address the repeated non-compliances noted during compliance assurance inspections.

Outcome: The holder has submitted the required information for review by the NNR and confirmation of the corrective actions will be done in the next inspection.

- e. Directive issued: On 19 February 2016, a directive was issued to SGS SA (Pty) Ltd (COR-247) to cease the demolition and rehabilitation activities that were taking place on the authorised site with approval by the NNR.

Outcome: The operations were ceased and a safety assessment has been submitted to the NNR for the activities to be approved.

- f. Directive issued: On 17 March 2016, a directive was issued to Neethling Plastic Recycling cc (unauthorised site), for handling radioactive material without authorisation.

Outcome: The facility has complied with the directive by ceasing operations and is to submit the safety assessment of the site for authorisation purposes.

5.10 Nuclear security

The implementation of the nuclear security regulatory programme is on the basis of the Nuclear Security Strategy and Policy. Nuclear Security regulatory activities entailed CAE and SARA obligations. Nuclear security inspections were conducted at Eskom Koeberg NPS, Necsa, Vaalputs Radioactive Waste Repository, NUFCOR and other designated NORM facilities. A special (unplanned) physical protection inspection was undertaken to interface the scheduled IAEA nuclear safeguards inspection at Necsa. The inspections were conducted on procedures, systems and sub-components of nuclear security measures and/or physical protection systems. Reviews were conducted on submissions received from the authorisation holders, IAEA draft Technical Guidance

documents, Department of Energy (DoE) terms of reference for the proposed national Nuclear Security Committee and the draft DoE Physical Protection Regulations for nuclear facilities and material.

Development of Nuclear Security Regulatory Framework

The following regulatory publications were approved by Board and Executive Committee respectively, for implementation in the regulation of nuclear security:

- Nuclear Security Regulations
- RG 0006 Guidance on physical protection systems for nuclear facilities
- RG 0014 Guidance on implementation of cyber or computer security for nuclear facilities
- RG 0021 Guidance on security during transport of nuclear or radioactive material
- RG 0022 Guidance on security incident reporting for nuclear facilities

Table-Top Nuclear Security Exercise

A Nuclear Security Table-Top Exercise (TTX) was conducted in October 2015 at Necsa-Pelindaba. Prior to conducting the TTX a comprehensive project plan comprising of activities to be undertaken, resource allocation, scenario, ground rules, umpire list, checklists, team lists and other required logistics was developed and approved.

5.11 Special projects

Regulatory framework project

The NNR sets safety standards in the form of regulations. Regulations are mandatory and set down specific requirements to be upheld by the authorisation holder or an applicant for a nuclear authorisation. The NNR continues to revise its regulations comprising the General Nuclear Safety Regulations which integrate all thematic areas in a coherent and harmonised set of requirements that will be complemented by a series of facilities and/or action 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 apply to specific facilities and/or actions.

The NNR continued with the development of guidance documents to support the implementation of regulations. To this end, the NNR has issued the following guidance in the reporting period:

- ✓ RG-0006: Guidance on Physical Protection Systems for Nuclear Facilities
- ✓ RG-0007: Regulatory Guide on Management of Safety
- ✓ RG-0008: General Transport Safety guidance
- ✓ RG-0011: Interim Guidance for the Siting of Nuclear Facilities
- ✓ RG-0012: Interim Guidance on Construction Management for Nuclear Facilities
- ✓ RG-0013: Training and Registration of appointed Medical Practitioners
- ✓ RG-0014: Guidance on Cyber Security for Nuclear Installations
- ✓ RG-0015: Interim Guidance on Registration of Nuclear Power Plant operators
- ✓ RG-0016: Guidance on Verification and Validation of Evaluation and calculational models
- ✓ RG-0017: National Dose Register
- ✓ RG-0018: Interim Guidance on Management of NORM tailing dams and waste rocks. One Technical Assessment Guidance (TAG) document on siting was developed. The development of the TAG is ground breaking as it was the first of this type of document that was developed by the NNR. TAGs are to provide NNR specialists with internal review guidance on specific topics and is equivalent to the USNRC review plans.

5.12 International co-operation

During the year under review, the NNR fulfilled all its national obligations and maintained active participation in the IAEA Safety Standards Committees, as well as several International Regulatory Fora. The NNR continued to participate in the Multinational Design Evaluation Programme (MDEP) and during the reporting period, attended the Steering Technical Committee meetings.

The NNR's bilateral co-operation efforts in nuclear safety and security continue to deepen during the review period, the NNR signed a new bilateral technical co-operation agreement with National Nuclear Safety Administration (NNSA) of China.

A team of senior officials and specialists convened successful nuclear safety bilateral co-operation study tours to counterpart Finnish and Swedish regulatory authorities.

NNR in conjunction with DoE hosted the IAEA Regional Meeting to promote the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management to member states in Africa.

Regional co-operation

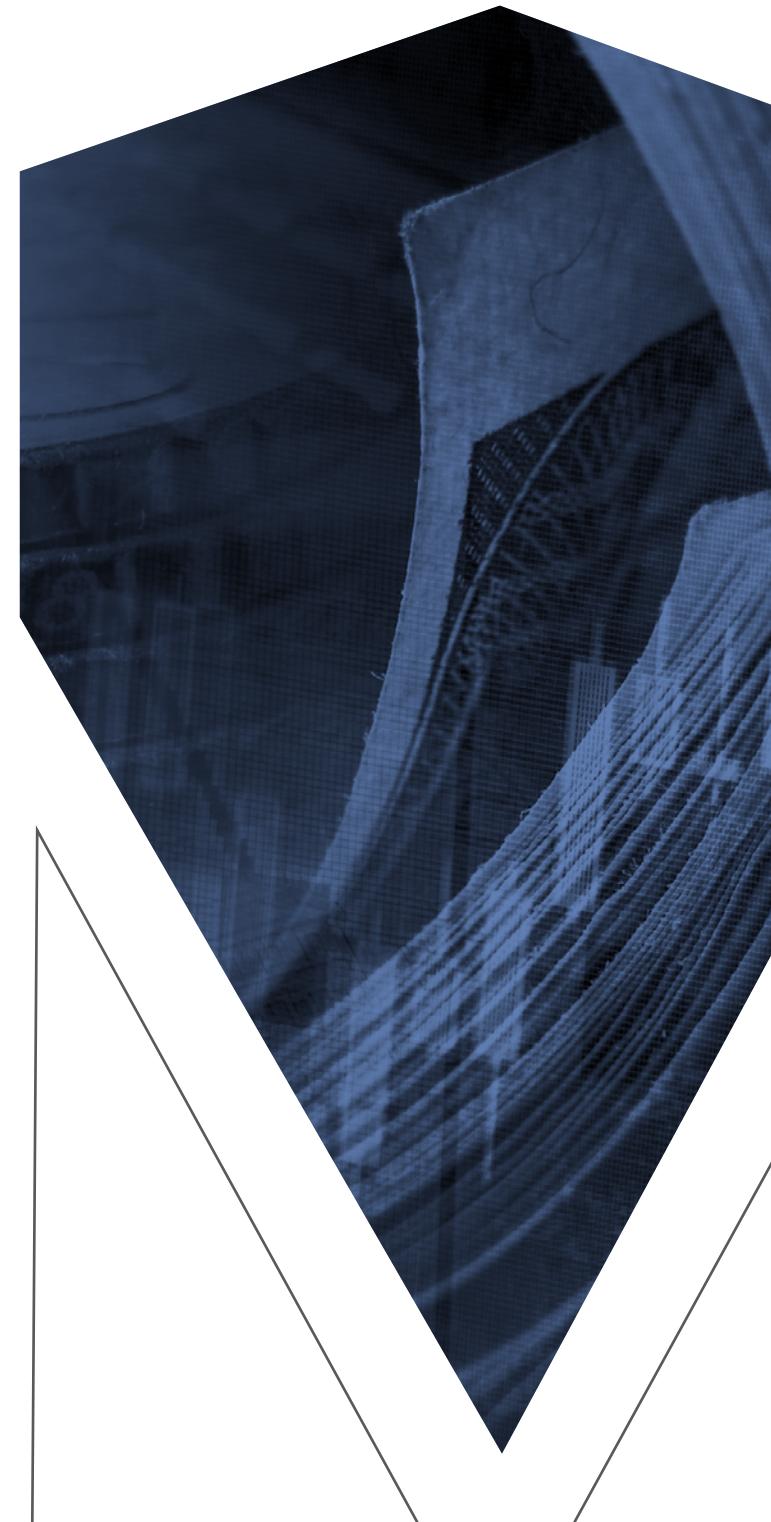
The NNR continued to participate in the technical working groups of the FNRBA, and participated in the updating of the FNRBA Strategic Plan. The NNR through the FNRBA Working Groups also supported the implementation of related IAEA regional projects.

5.13 Stakeholder relations and public outreach

The NNR's public outreach efforts during the review period were primarily focused on local communities affected by mining and minerals processing activities. The NNR conducted presentations to learners at schools and to residents in the local affected communities. For communities living near nuclear installations, the NNR utilised the Public Safety Information Forums to increase awareness and understanding of its regulatory processes. The NNR convened information-sharing meetings with representatives from civil society, Non-Government Organisations (NGOs) and affected parties.

SECTION 6

AUDITED ANNUAL FINANCIAL STATEMENTS



Report of the auditor-general to Parliament on the National Nuclear Regulator

Report on the financial statements

Introduction

1. I have audited the financial statements of the National Nuclear Regulator set out on pages 91 to 128, which comprise the statement of financial position as at 31 March 2016, the statement of financial performance, statement of changes in net assets, cash flow statement and reconciliation between budget and statement of financial performance for the year then ended, as well as the notes, comprising a summary of significant accounting policies and other explanatory information.

Accounting authority's responsibility for the financial statements

2. The board of directors, which constitutes the accounting authority, is responsible for the preparation and fair presentation of these financial statements in accordance with the South African Standards of Generally Recognised Accounting Practice (SA Standards of GRAP) and the requirements of the Public Finance Management Act of South Africa, 1999 (Act No. 1 of 1999) (PFMA), and for such internal control as the accounting authority determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor-general's responsibility

3. My responsibility is to express an opinion on these financial statements based on my audit. I conducted my audit in accordance with International Standards on Auditing. Those standards require that I comply with ethical requirements, and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

4. An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the

auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

6. In my opinion, the financial statements present fairly, in all material respects, the financial position of the National Nuclear Regulator as at 31 March 2016 and its financial performance and cash flows for the year then ended, in accordance with the SA Standards on GRAP and the requirements of the PFMA.

Report on other legal and regulatory requirements

7. 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 findings on the reported performance information against predetermined objectives for selected programmes presented in the annual performance report, compliance with legislation and internal control. The objective of my tests was to identify reportable findings as described under each subheading but not to gather evidence to express assurance on these matters. Accordingly, I do not express an opinion or conclusion on these matters.

Predetermined objectives

8. I performed procedures to obtain evidence about the usefulness and reliability of the reported performance information for the following selected programmes

presented in the annual performance report of the public entity for the year ended 31 March 2016:

- Programme 1: SARA (standards authorisations and reviews assessments)
 - Programme 2: CAE (compliance assurance and enforcement).
9. I evaluated the usefulness of the reported performance information to determine whether it was presented in accordance with the National Treasury's annual reporting principles and whether the reported performance was consistent with the planned programmes. I further performed tests to determine whether indicators and targets were well defined, verifiable, specific, measurable, time bound and relevant, as required by the National Treasury's Framework for Managing Programme Performance Information.
10. I assessed the reliability of the reported performance information to determine whether it was valid, accurate and complete.
11. I did not raise any material findings on the usefulness and reliability of the reported performance information for the following programmes:
- Programme 1: SARA (standards authorisations and reviews assessments)
 - Programme 2: CAE (compliance assurance and enforcement)

Additional matters

12. Although I raised no material findings on the usefulness and reliability of the reported performance information for the selected programmes, I draw attention to the following matters:

Achievement of planned targets

13. Refer to the annual performance report on pages 22 to 25 and 26 to 36 for information on the achievement of the planned targets for the year.

Adjustment of material misstatements

14. I identified material misstatements in the annual performance report submitted for auditing on the reported performance information for programme 1: SARA and

programme 2: CAE. As management subsequently corrected the misstatements, I did not raise any material findings on the usefulness and reliability of the reported performance information.

Compliance with legislation

15. I performed procedures to obtain evidence that the public entity had complied with applicable legislation regarding financial matters, financial management and other related matters. I did not identify any instances of material non-compliance with specific matters in key legislation, as set out in the general notice issued in terms of the PAA.

Internal control

16. I considered internal control relevant to my audit of the financial statements, annual performance report and compliance with legislation. I did not identify any significant deficiencies in internal control.

Auditor General

Pretoria

31 July 2016



Auditing to build public confidence

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 Cohen
Mr. T Mofokeng
Mr. A Abader
Mr. S Kakoma
Mr. J Leaver
Mr. N Lesufi
Mr. S Mimi
Mr. K Maphoto (alternative to Ms. E Monale)
Dr. T Motshudi
Dr. M Tyobeka
Mr. M Gordon
Ms. L Sedumoeng

Registered office

Eco Glades Office Park
Eco Glades2, 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

P.O Box 7106
Centurion, Eco Park Highveld Ext 75, Pretoria
0046

Controlling entity

Department of Energy

Bankers

ABSA Bank

Auditors

Auditor-General of South Africa

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 audited annual financial statements and related financial information included in this report. It is the responsibility of the directors to ensure that the audited 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 audited annual financial statements and were given unrestricted access to all financial records and related data.

The audited 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 audited 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 can not 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 audited 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 2017 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 revenue from authorisation holders for continued funding of operations. The audited annual financial statements are prepared on the basis that the entity is a going concern and that the Department of Energy has neither the intention nor the need to liquidate or curtail materially the scale of the entity.

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 audited annual financial statements. The audited annual financial statements have been examined by the entity's external auditors and their report is presented on page 84.

The audited annual financial statements set out on pages 91 to 128, which have been prepared on the going concern basis, were approved by the accounting authority on 31 July 2016 and were signed on its behalf by:



Dr. T Cohen

Chairperson of the Board



Dr M.B Tyobeka

Chief Executive Officer

Audit and Risk Management Committee Report

We are pleased to present our report for the financial year ended 31 March 2016.

Audit committee responsibility

The audit committee reports that it has complied with its responsibilities arising from section 38(10)(1) of the PFMA and Treasury Regulation 3.1.

The audit committee also reports that it has adopted appropriate formal terms of reference as its audit committee charter, has regulated its affairs in compliance with this charter and has discharged all its responsibilities as contained therein.

The effectiveness of internal control

The system of internal controls applied by the entity over financial and risk management is effective, efficient and transparent. In line with the PFMA and the King III Report on Corporate Governance requirements, Internal Audit provides the audit committee and management with assurance that the internal controls are appropriate 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 Auditors, the Audit Report on the audited annual financial statements, and the management report of the Auditor-General South Africa, it was noted that no matters were reported that indicate any material deficiencies in the system of internal control or any deviations there from. Accordingly, we can report that the system of internal control over financial reporting for the period under review was efficient and effective.

The audit committee is satisfied with the content and quality of quarterly reports prepared and issued by the accounting officer of the entity during the year under review.

Evaluation of audited annual financial statements

The audit committee has:

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

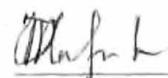
The audit committee concurs with and accepts the Auditor General South Africa's report on the audited annual financial statements, and are of the opinion that the audited annual financial statements should be accepted and read together with the report of the Auditor General South Africa.

Internal audit

The audit committee is satisfied that the internal audit function is operating effectively and that it has addressed the risks pertinent to the entity and its audits.

Auditor General South Africa

The audit committee has met with the Auditor General South Africa to ensure that there are no unresolved issues.



Mr T Mofokeng CA (SA)

Chairperson of the Audit Committee

Date: 31 July 2016

Directors' Report

The directors have pleasure in submitting their report and the annual financial statements of the NNR for the year ended 31 March 2016.

1. 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.

2. 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.

3. Going concern

The audited 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.

4. Subsequent events

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

5. 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.

6. Accounting policies

The audited 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.

7. 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 Cohen	South African	None
Mr. T Mofokeng	South African	None
Mr. A Abader	South African	None
Mr. S Kakoma	South African	None
Mr. J Leaver	South African	None
Mr. N Lesufi	South African	None
Mr. S Mimi	South African	None
Mr. K Mapheko (alternative to Ms. E Monale)	South African	None
Dr. T Motshudi	South African	None
Dr. M.B Tyobeka	South African	None
Mr. M Gordon	South African	None
Ms. L Sedumoeng	South African	None

Directors' Report

8. Secretary

The board 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	P.O Box 7106 Centurion, Eco Park Highveld Ext 75 Pretoria 0046

9. Corporate governance

Board of directors Meetings

The accounting authority has met on six (6) separate occasions during the financial year.

The accounting authority schedules to meet at least four 4 times per annum, see page 16 to 18 for details of the annual report for schedule of meetings. Directors have access to all members of management of the NNR.

10. Controlling entity

The entity's controlling entity is the Department of Energy

11. Bankers

ABSA Bank

12. Auditors

Auditor-General of South Africa is the legislated auditor of National Nuclear Regulator.

Statement of Financial Position as at 31 March 2016

Figures in Rand	Note(s)	2016	2015
Assets			
Current Assets			
Receivables from exchange transactions			
	7	19,416,565	4,970,315
Receivables from non-exchange transactions		708,029	107,045
Cash and cash equivalents	8	59,479,570	94,010,483
		79,604,164	99,087,843
Non-Current Assets			
Property, plant and equipment	3	120,633,953	124,380,961
Intangible assets	4	547,846	947,780
		121,181,799	125,328,741
Total Assets		200,785,963	224,416,584
Liabilities			
Current Liabilities			
Other financial liabilities	10	8,050,624	7,457,644
Operating lease liability	5	78,584	106,857
Payables from exchange transactions	12	9,940,170	10,191,836
Provisions	11	16,738,024	14,391,097
		34,807,402	32,147,434
Non-Current Liabilities			
Other financial liabilities	10	49,412,561	57,360,179
Employee benefit obligation	6	10,124,054	10,741,139
Unspent conditional grants and receipts	9	18,265,136	24,231,917
		77,801,751	92,333,235
Total Liabilities		112,609,153	124,480,669
Net Assets		88,176,809	99,935,915
Accumulated surplus		88,176,809	99,935,915

Statement of Financial Performance

Figures in Rand	Note(s)	2016	2015
Revenue			
Authorisation fees	14	147,442,573	132,065,343
Application fees		623,992	1,214,026
Actuarial gain	6	617,085	1,463,706
Other income	16	904,815	535,529
Gain-Other financial liability	10	-	264,051
Deferred Income		5,855,458	6,936,779
Interest received	21	4,428,596	4,199,525
Government grants	15	21,487,000	33,697,000
Total revenue		181,359,519	180,375,959
Expenditure			
Compensation of employees	19	(122,352,982)	(105,284,765)
Depreciation and amortisation		(12,774,012)	(12,315,512)
Finance costs	22	(5,924,373)	(6,069,235)
Bad debts	20	(1,905,016)	(896,678)
Goods and services	17	(50,162,242)	(45,549,071)
Total expenditure		(193,118,625)	(170,115,261)
Operating (deficit) surplus	18	(11,759,105)	10,260,698
(Deficit) surplus for the year		(11,759,105)	10,260,698

Statement of Changes in Net Assets

Figures in Rand

	Accumulated surplus	Total net assets
Balance at 01 April 2014	89,675,217	89,675,217
Changes in net assets		
Surplus for the year	10,260,698	10,260,698
Total changes	10,260,698	10,260,698
Balance at 01 April 2015	99,935,914	99,935,914
Changes in net assets		
Surplus for the year	(11,759,105)	(11,759,105)
Total changes	(11,759,105)	(11,759,105)
Balance at 31 March 2016	88,176,809	88,176,809
Note(s)		

Cash Flow Statement

Figures in Rand

	Note(s)	2016	2015
Cash flows from operating activities			
Receipts			
Authorisation fees		131,114,476	134,673,599
Goverment grants		21,487,000	33,697,000
Interest income		4,428,596	4,199,525
Application fees		623,992	1,057,858
Other Income		850,956	517,585
		158,505,020	174,145,567
Payments			
Compesation of employees		(119,895,818)	(102,594,511)
Goods & Services		(51,160,165)	(40,289,472)
Finance costs		(5,924,373)	(6,069,235)
		(176,980,356)	(148,953,218)
Net cash flows from operating activities	24	(18,475,336)	25,192,349
Cash flows from investing activities			
Purchase of property, plant and equipment	3	(8,742,946)	(7,931,984)
Proceeds from sale of property, plant and equipment	3	42,007	35,135
Net cash flows from investing activities		(8,700,939)	(7,896,849)
Cash flows from financing activities			
(Decrease)/Increase on other financial liabilities		(7,354,638)	(7,037,403)
Net cash flows from financing activities		(7,354,638)	(7,037,403)
Net increase/(decrease) in cash and cash equivalents		(34,530,913)	10,258,097
Cash and cash equivalents at the beginning of the year		94,010,483	83,752,391
Cash and cash equivalents at the end of the year	8	59,479,570	94,010,488

Statement of Comparison of Budget and Actual Amounts

Budget on Accrual Basis	Approved budget	Adjustments	Final Budget	Actual amounts on comparable basis	Difference between final budget and actual	Reference
Figures in Rand						
Statement of Financial Performance						
Revenue from exchange transactions						
Authorisation fees	143,739,000	-	143,739,000	147,442,573	3,703,573	Note 34.1
Application fees	1,000,000	-	1,000,000	623,992	(376,008)	
Actuarial gain	-	-	-	617,085	617,085	Note 34.2
Other income	500,000	-	500,000	904,815	404,815	
Deferred income	-	-	-	5,855,458	5,855,458	Note 34.3
Interest received	2,648,000	-	2,648,000	4,428,596	1,780,596	Note 34.4
Total revenue from exchange transactions	147,887,000	-	147,887,000	159,872,519	11,985,519	
Revenue from non-exchange transactions						
Taxation revenue						
Government grants	21,487,000	-	21,487,000	21,487,000	-	
Total revenue	169,374,000	-	169,374,000	181,359,519	11,985,519	
Expenditure						
Compensation of employees	(108,716,000)	(5,991,104)	(114,707,104)	(122,352,982)	(7,645,878)	
Depreciation and amortisation	(13,090,000)	7,749,280	(5,340,720)	(12,774,012)	(7,433,292)	Note 34.5
Finance costs	(5,363,000)	-	(5,363,000)	(5,924,373)	(561,373)	
Debt impairment	-	-	-	(1,905,016)	(1,905,016)	Note 34.6
Goods & Services	(42,205,000)	(1,758,176)	(43,963,176)	(50,162,242)	(6,199,066)	Note 34.7
Total expenditure	(169,374,000)	-	(169,374,000)	(193,118,625)	(23,744,625)	
Deficit for the year	-	-	-	(11,759,105)	(11,759,105)	
Actual Amount on Comparable Basis as Presented in the Budget and Actual Comparative Statement	-	-	-	(11,759,105)	(11,759,105)	

Accounting Policies

1. Presentation of Audited 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 audited annual financial statements, management is required to make estimates and assumptions that affect the amounts represented in the audited 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 audited 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 licensed holders. Revenue from special projects is recognised in accordance with arrangements with authorisation holders.

1.3 Goverment grant

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 grant.

1.4 Property, plant and equipment

Property, plant and equipment (owned and leased) is stated at historical cost less accumulated depreciation and adjustment for any impairments. Costs include those incurred initially to acquire an item of property, plant and equipment and costs incurred subsequently to add to, replace part of, or service it if it is probable that future economic benefits associated with the replacement will flow to the NNR and the cost can be measured reliably. If a replacement cost is recognized in the carrying amount of an item of property, plant and equipment, the carrying amount of the replaced part is derecognised. Estimates are mainly based on historical information relating to use of the asset.

The depreciation charge for each period is recognized in surplus or deficit. The assets' residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each reporting date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount.

The gains or losses arising from 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 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.

Depreciation is calculated on the straight-line method to write off the cost, less residual value, of each asset over their estimated useful lives as follows:

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

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

1.5 Intangible assets
Research and Development
Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognized in the Statement of Financial Performance as an expense in the period incurred.
Expenditure on development activities, whereby research findings are applied to a plan or design for the production of new or substantially improved products and processes, is capitalized if the development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable, and the entity has sufficient resources to complete development, and to use or sell the asset. The expenditure capitalized includes the cost of materials, direct labour and an appropriate proportion of overheads. Capitalized development expenditure is stated at cost less accumulated amortization and impairment losses.
Computer software
Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and bring to use the specific software. Estimates are mainly based on historical information relating to use of the asset and all residual values are nil.
Amortization is charged to the Statement of Financial Performance on a straight-line basis over the estimated useful lives of intangible assets.

Item	Useful life
Computer software, other	1-3 years

The gains or losses arising from derecognition of an item of intangible asset is included in surplus or deficit when the item is derecognised. The gain or loss arising from 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.

1.6 Subsequent expenditure

Subsequent expenditure on item of property plant and equipment and intangible assets is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is recognized 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 be impaired. If indications exist, the recoverable amount of the asset is estimated. An impairment loss is recognized 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 assesses at each reporting date whether there is any indication that an impairment loss recognized 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 increased carrying amount of an asset attributable to a reversal of an impairment loss does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years. A reversal of an impairment loss of assets carried at cost less accumulated depreciation or amortization is recognized immediately in Statement of Financial Performance.

1.8 Financial instruments

Recognition and initial measurement

All financial instruments are initially recognized 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 recognized 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 amortized cost are recognized in Statement of Financial Performance when the financial asset or financial liability is derecognised or impaired, and through the amortization 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 recognized at fair value plus transaction costs that are directly attributable to their acquisition or issue, and are subsequently carried at amortized cost less provision for impairment.

1.8 Financial instruments (continued)

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 recognized 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 recognized at fair value net of any transaction costs directly attributable to the issue of the instrument. Such interest-bearing liabilities are subsequently measured at amortized 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 recognized at fair value and subsequently carried at amortized 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 recognized 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 recognized as an expense and the contractual payments are recognized as an operating lease liability. This liability is not discounted. Any contingent rents are expensed in the period in which they are incurred.

1.10 Employee benefits

The NNR provides defined benefit plans for certain post-retirement benefits. 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 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.

Post-employment benefits

1.10 Employee benefits (continued)

The NNR provides defined benefit and defined contribution plans for employees' retirement benefit. These plans are funded by the employees and the entity, taking into account recommendations of the independent actuaries. 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 surplus recognised and reflected as deferred expenses is limited to unrecognised actuarial losses 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 benefit

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

The financial statements have been prepared on a going concern assumption that the entity will continue in operation for the foreseeable future.

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.

Notes to the Audited Annual Financial Statements

Figures in Rand

2016 2015

2. Basis of preparation

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

3. Property, plant and equipment

	2016		2015	
	Cost / Valuation	Accumulated depreciation and accumulated impairment	Carrying value	Cost / Valuation
Land	213,750	-	213,750	213,750
Buildings	112,773,921	(23,023,655)	89,750,266	112,283,493
Assets under construction	4,805,767	-	4,805,767	-
Furniture and fixtures	5,172,426	(1,225,072)	3,947,354	5,102,538
Motor vehicles	836,809	(306,687)	530,122	836,809
Office equipment	8,913,348	(6,101,568)	2,811,780	8,466,401
IT equipment	13,855,218	(9,154,172)	4,701,046	12,337,263
Leasehold improvements	5,343,134	(3,443,967)	1,899,167	5,343,134
Laboratory equipment	17,450,042	(5,475,341)	11,974,701	16,411,984
Total	169,364,415	(48,730,462)	120,633,953	160,995,372
				(36,614,411)
				124,380,961

Reconciliation of property, plant and equipment - 2016

	Opening balance	Additions	Disposals	Depreciation	Total
Land	213,750	-	-	-	213,750
Buildings	94,803,375	490,428	-	(5,543,537)	89,750,266
Assets under construction	-	4,805,767	-	-	4,805,767
Furniture and fixtures	4,156,070	69,888	-	(278,604)	3,947,354
Motor vehicles	616,335	-	-	(86,213)	530,122
Office equipment	3,587,431	446,947	-	(1,222,598)	2,811,780
IT equipment	4,841,656	1,891,859	(115,875)	(1,916,594)	4,701,046
Leasehold improvements	3,680,212	-	-	(1,781,045)	1,899,167
Laboratory equipment	12,482,132	1,038,057	-	(1,545,488)	11,974,701
	124,380,961	8,742,946	(115,875)	(12,374,079)	120,633,953

Reconciliation of property, plant and equipment - 2015

	Opening balance	Additions	Disposals	Depreciation	Total
Land	213,750	-	-	-	213,750
Buildings	100,337,891	-	-	(5,534,516)	94,803,375
Furniture and fixtures	3,552,328	843,459	(15,269)	(224,448)	4,156,070
Motor vehicles	23,901	625,961	-	(33,527)	616,335
Office equipment	4,410,932	367,800	(37,799)	(1,153,502)	3,587,431
IT equipment	3,590,419	2,775,794	-	(1,524,557)	4,841,656
Leasehold improvements	4,477,230	816,295	-	(1,613,313)	3,680,212
Laboratory equipment	11,577,546	2,502,675	-	(1,598,089)	12,482,132
	128,183,997	7,931,984	(53,068)	(11,681,952)	124,380,961

Notes to the Audited Annual Financial Statements

Figures in Rand	2016	2015
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3. Property, plant and equipment (continued)

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

The NNR owns an Office buiding located at Erf 3078 in Highveld, Centurion, Gauteng (Pledged as a seutiry for ABSA mortgage bond) and Land & Building located at Erf 3187 in Melkbosch Strand in the Blaauberg Municipality, Western Cape.

4. Intangible assets

	2016			2015		
	Cost / Valuation	Accumulated amortisation and accumulated impairment	Carrying value	Cost / Valuation	Accumulated amortisation and accumulated impairment	Carrying value
Computer software, other	4,451,060	(3,903,214)	547,846	4,451,060	(3,503,280)	947,780

Reconciliation of intangible assets - 2016

	Opening balance	Amortisation	Total
Computer software, other	947,780	(399,934)	547,846

Reconciliation of intangible assets - 2015

	Opening balance	Amortisation	Total
Computer software, other	1,581,339	(633,559)	947,780

5. Operating lease liability

Current liabilities	78,584	106,857
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The National Nuclear Regulator rents a laboratory space for independent environmental sample analysis at Agriculture Research Council with renewal option. A lease agreement was entered into between the National Nuclear Regulator and Agriculture Research Council effective 01 April 2013 and will be expiring on 31 March 2021. Monthly rental amounts to R 61 544 and allows for annual escalation of 10% per annum, total lease expense for the year amounts to R 698 834 .

The National Nuclear Regulator rents an office building in Cape Town for temporary office accommodation while the NNR office building is being refurbished. A lease agreement was entered into between the National Nuclear Regulator and Delprop Investment (Pty) Ltd effective 01 December 2014 and will be expiring on 31 November 2016. Monthly rental amounts to R 61 807 and allows for annual escalation of 8% per annum, total lease expense for the year amounts to R 687 174 . Equalisation of operating lease expense resulted in lease liability amounting to R 8 810.

A lease agreement was entered into between the National Nuclear Regulator and National Metrology Institute of South Africa on 11 May 2012. The agreement come into effect on 01 April 2014 and will be expiring on 31 March 2021. Monthly rental amounts to R 6 388 and allows for annual escalation of 11% per annum, total lease expense for the year amounts to R 107 130.

The National Nuclear Regulator rents a laboratory space for independent environmental sample analysis at National Metrology Institute of South Africa. Equalisation of operating lease expense resulted in lease liability amounting to R 30 484.

6. 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

Figures in Rand	2016	2015
6. Employee benefit obligations (continued)		
The amounts recognised in the statement of financial position are as follows:		
Carrying value		
Present value of the defined benefit obligation-wholly unfunded	(10,124,054)	(10,741,139)
Present value of the defined benefit obligation-partly or wholly funded	(60,882,000)	(65,020,000)
Fair value of plan assets	69,910,000	66,723,000
Asset not recognised	(9,028,000)	(1,703,000)
	(10,124,054)	(10,741,139)
The major categories of plan assets as a percentage of total plan assets are as follows:		
Equity	70.00 %	70.00 %
Bonds	30.00 %	30.00 %
	-	-
Net expense (gain) recognised in the statement of financial performance		
Current service cost	75,813	64,643
Interest cost	870,136	1,117,314
Actuarial (gains) losses	(916,549)	(2,033,301)
Expected return on plan assets	(646,485)	(612,362)
	(617,085)	(1,463,706)
Actual return on planned assets		
Expected return on planned assets	6,501,000	6,947,000
Actuarial gains (loss) on planned assets	194,000	(1,492,000)
	6,695,000	5,455,000
Calculation of actuarial gains and losses		
Actuarial (gains) losses – Obligation	(6,181,000)	(684,000)
Actuarial (gains) losses – Plan assets	194,000	(1,492,000)
	(5,987,000)	(2,176,000)

Figures in Rand	2016	2015
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6. Employee benefit obligations(continued)

6.1 Post Retirement Pension Benefit Plan

The NNR makes contributions towards post retirement pension benefits for certain eligible employees.

Changes in present value of the defined benefit obligations are as follows:

Opening balance	65,020,000	63,306,000
Interest cost	5,339,000	5,666,000
Current service cost	769,000	718,000
Benefits paid	(4,065,000)	(3,986,000)
Actuarial (gain)losses	(6,181,000)	(684,000)
Closing balance	60,882,000	65,020,000

Changes in fair value of planned assets are as follows:

Opening balance fair value of planned assets	66,723,000	64,732,000
Expected return on planned assets	6,501,000	6,947,000
Contributions by employer	387,000	362,000
Contributions by participants	170,000	160,000
Benefits paid	(4,065,000)	(3,986,000)
Actuarial gain/(losses)	194,000	(1,492,000)
Closing balance	69,910,000	66,723,000

Key assumptions used

Assumptions used at the reporting date:		
Discount rates used	9.90 %	8.40 %
Expected rate of return on assets	10.00 %	10.00 %
General inflation	6.00 %	6.00 %
Salary inflation	7.00 %	7.00 %
Funding levels	114.8%	102.6%

Figures in Rand	2016	2015
Sensitivity Analysis		
Effect on defined benefit obligation-Discount rate	One percentage point increase 5,298,000	One percentage point decrease (4,559,000)
Percentage change effect on defined benefit obligation-Discount rate	9	8
Effect on defined benefit obligation-Salary inflation	224,000	(220,000)
	-	-
Effect on defined benefit obligation-Discount rate-Post-retirement mortality	PA (90) (1,736,000)	PA (90)-2 1,736,000
Percentage change effect on defined benefit obligation-Post-retirement mortality	(3)	3
	-	-

6. Employee benefit obligations (continued)

6.2 Post- retirement medical aid benefit obligation

The NNR has made provision for post-employment medical benefit covering 10 employees in 2016. The actuarial valuation was determined by Independent Actuarial Consultants (Pty) Ltd, who are 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 pays 100% of the membership subscriptions for staff members who had retired from the services of the NNR (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 01 July 1990, who were in the continuous employment of the NNR before 01 July 1990 to the date of retirement.

The NNR introduced a sliding scale for membership subscriptions for staff joining after 01 July 1990. Subsidy reduced step wise from 100% to a minimum of 60% for employees that joined the NNR after 01 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 2016.

Figures in Rand	2016	2015
Changes in present value of the defined benefits are as follows:		
Opening defined benefit obligation	10,741,139	12,204,845
Interest cost	870,136	1,117,314
Current service cost	75,813	64,643
Benefits paid	(646,485)	(612,362)
Actual (gain) losses recognised in statement of financial performance	(916,549)	(2,033,301)
	10,124,054	10,741,139
Actuarial principal assumption used at the reporting date		
Discount rate used rate	9 %	8 %
Medical inflation rate	8 %	7 %
General inflation rate	7 %	8 %
Post-retirement interest rate	1 %	1 %
Proportion of continuing membership at retirement	100 %	100 %
Proportion of retiring members who are married	90 %	90 %
	-	-
Age of spouse	In service members: Husbands 3 years older than wives	In service members: Husbands 3 years older than wives
Mortality of in-service members	Retirement age of members 65 SA SA85-90 (L)	Retirement age of members 65 SA SA85-90 (L)
Mortality of continuation members	PA (90)-2 Years	PA (90)-2 Years
Annual rate of withdrawal - from age 55+	4.00 %	4.00 %
Number of members		
Number of members in active employment	3	4
Number of pensioners	7	8
	10	12

Figures in Rand	2016	2015
6. Employee benefit obligations (continued)		

Average retirement age	60	60
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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 NNR 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	One percentage point decrease
Effect on the aggregate of the service cost and interest cost-medical inflation	1,072,638	(927,854)
Percentage change effect on aggregate of service and interest cost-medical inflation	1	1
Effect on defined benefit obligation-medical inflation	11,196,692	9,196,200
Percentage change effect on defined benefit obligation-medical inflation	11	9
Effect on the aggregate of the service cost and interest cost-discount rate	901,191	1,059,850
Percentage change effect on aggregate of service and interest cost-discount rate	1	1
Effect on defined benefit obligation-discount rate	9,222,863	11,183,904
Percentage change effect on defined benefit obligation-discount rate	11	9

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

	2016 R	2015 R	2014 R	2013 R	2012 R
Defined benefit obligation	10,124,054	10,741,139	12,204,845	11,265,549	13,055,000
Experiencead justments on plan liabilities	(916,549)	(2,033,301)	580,145	(213,879)	6,960,000

Figures in Rand

2016 2015

6.3 Defined contribution plan

It is the policy of the entity to provide retirement benefits to all its 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.

The amount recognised as an expense for defined contribution plans is	11,639,745	11,581,718
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7. Receivables from exchange transactions

Trade debtors	19,149,681	4,726,600
Staff advance	32,707	16,283
Deposits & Prepayments	234,177	227,432
	19,416,565	4,970,315

During the year the NNR disbursed R 578 thousand recoverable from AREVA, the amount is paid for providing funding to external bursary holders for students who are 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 2016, R 19,193,990 (2015: R 5,154,044) were past due date but not impaired.

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

1 month past due	1,299,924	1,685,233
2 months past due	14,754,618	78,443
4 months past due	-	467,603
7 months past due	2,775,950	-
8 months past due	-	2,722,463
9 months past due	285,056	-
10 months past due	78,443	200,303

Figures in Rand

2016 2015

Trade and other receivables impaired

As of 31 March 2016, trade and other receivables of R 4,031,187 (2015: R 2,126,171) were impaired and provided for.

The ageing of these receivables is as follows:

Over 12 Months	4,031,187	2,126,171
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Reconciliation of provision for impairment of trade and other receivables

Opening balance	2,126,261	1,366,438
Provision for impairment	1,905,016	897,035
Amounts written off as uncollectible	-	(137,212)
	4,031,277	2,126,261

The creation and release of provision for impaired receivables have been included operating expenses in the NNR 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.

8. Cash and cash equivalents

Cash and cash equivalents consist of:

Cash on hand	5,877	12,765
Bank balances	526,050	9,377,712
Short-term deposits	58,947,643	84,620,006
	59,479,570	94,010,483

Included in the cash balance above is R 18.6 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	2016	2015
9. Unspent conditional grants and receipts		
Unspent conditional grants and receipts comprises of:		
Unspent conditional grants and receipts		
Government grant	18,265,136	24,231,917
Movement during the year		
Balance at the beginning of the year	24,231,917	31,057,374
Additions during the year	-	111,322
Recognition during the year	(5,966,781)	(6,936,779)
	18,265,136	24,231,917

- 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 R 5.6 Million. The amount included in unspent conditional relating to the projects amount to R 6.5 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 R 203 thousand. The amount included in unspent conditional grant relating to the projects amount to R 11.5 Million.

Figures in Rand	2016	2015
10. Other financial liabilities		
At amortised cost		
Re-imbursement agreement	1,413,700	2,435,949
An agreement between NNR& Faerie Glen Waterpark(Pty)Ltd exists for re-imbursement of tenant installation cost incurred by Faerie Glen Waterpark (Pty). The re-imbursement is repayable on monthly instalment of R100000 over the period of five years effective from 22 June 2012 and final settlement due on the 07 June 2017. The liability bears no interest.		
Mortgage bond	56,049,485	62,381,874
ABSA mortgage bond over head office building, the loan is repayable on monthly instalments of R991101 effective 22 June 2012 over the next 10 years and final settlement due 07 June 2022. The loan bears interest at a variable rate of 10.5% per annum Monthly bond repayment increased to R1031445 during the current year as a result of increase in variable interest rate which increased from 9.75% to 10.5% in January 2016. The loan has a remaining period of 75 months as at 31 March 2016. The loan is secured over head office building with carrying of R 85.4 Million.		
	57,463,185	64,817,823
Total other financial liabilities	57,463,185	64,817,823
Non-current liabilities		
At amortised cost	49,412,561	57,360,179
Current liabilities		
At amortised cost	8,050,624	7,457,644

Figures in Rand

2016 2015

11. Provisions

Reconciliation of provisions - 2016

	Opening Balance	Additions	Utilised during the year	Reversed during the year	Total
Annual Leave	6,864,215	558,753	-	-	7,422,968
Annual performance bonus	7,526,882	9,315,056	(7,522,457)	(4,425)	9,315,056
	14,391,097	9,873,809	(7,522,457)	(4,425)	16,738,024

Reconciliation of provisions - 2015

	Opening Balance	Additions	Utilised during the year	Total
Annual Leave	6,050,281	813,934	-	6,864,215
Performance Bonus	5,185,994	7,369,711	(5,028,823)	7,526,882
	11,236,275	8,183,645	(5,028,823)	14,391,097

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 2016. 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 payout rate and leave balance which are due to employees as at 31 March 2016.

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 2016. 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 2014/15 financial year at an average individual score of 4 achieved during prior year.

Figures in Rand	2016	2015
12. Payables from exchange transactions		
Trade payables	4,289,258	3,418,057
Payments received in advance	4,090,268	4,639,850
Accruals	330,986	1,068,773
13th Cheque accrual	1,229,658	1,065,156
	9,940,170	10,191,836
13. Financial instruments disclosure		
14. Revenue		
Authorisation fees	147,442,573	132,065,343
Application fees	623,992	1,214,026
Actuarial gain	617,085	1,463,706
Other income	904,815	535,529
Gain-Other financial liabilities	-	264,051
Deferred Income	5,855,458	6,936,779
Interest received	4,428,596	4,199,525
Government grants	21,487,000	33,697,000
	181,359,519	180,375,959
The amount included in revenue arising from exchanges of goods or services areas follows:		
Authorisation fees	147,442,573	132,065,343
Application fees	623,992	1,214,026
Application fee	617,085	1,463,706
Financial instruments-Fee income	-	264,051
Interest received	4,428,596	4,199,525
	153,112,246	139,206,651
The amount included in revenue arising from non-exchange transactions is as follows:		
Transfer revenue		
Government grants	21,487,000	33,697,000

Figures in Rand	2016	2015
15. Government grants		
Government grant	21,487,000	33,697,000
Unconditional		
Unconditional grants received	21,487,000	33,697,000
Conditional grant		
Balance unspent at beginning of year	24,231,917	31,057,374
Current-year receipts	-	111,322
Conditions met - amount realised	(5,966,781)	(6,936,779)
	18,265,136	24,231,917

The NNR has an obligation to establish an Regulatory Emergency Response Control Centre and refurbish Cape Town site office (see note 9) for details.

16. Other income		
Other sundry income	904,815	535,529

Figures in Rand

2016 2015

17. Goods and services

Advertising	644,204	1,848,026
Property rates & municipal charges	3,266,187	1,108,647
Auditor's fees	1,433,883	1,166,583
Cleaning	688,393	543,926
Consulting and professional fees	6,441,885	8,143,142
Consumables	1,168,359	860,143
Insurance	202,364	722,232
Community development and training	688,206	526,012
Conferences and seminars	824,524	621,315
IT expenses	4,232,083	1,681,197
Operating lease expense	1,829,454	1,411,431
Marketing	336,094	208,660
Magazines, books and periodicals	26,546	132,164
Medical expenses	115,872	149,368
Postage and courier	191,016	134,496
Printing and stationery	1,005,075	1,380,292
Security	1,426,805	1,299,974
Software expenses	2,383,550	1,990,339
Subscriptions and membership fees	1,813,713	1,319,817
Telephone and fax	1,143,963	1,322,636
Training	1,766,151	1,582,381
Travel - local	5,396,320	5,098,539
Travel - overseas	7,090,593	5,888,926
Electricity	1,275,156	905,560
Repairs & Maintenance	1,284,159	2,870,123
Board fees	671,265	814,982
Bursaries	371,789	577,783
Other expenses	2,444,633	1,240,377
	50,162,242	45,549,071

Figures in Rand

2016 2015

18. Operating (deficit) surplus

Operating (deficit) surplus for the year is stated after accounting for the following:

Operating lease charges

Premises

• Contractual amounts	1,465,266	1,047,243
Equipment		
• Contractual amounts	364,188	364,188
	1,829,454	1,411,431

Depreciation on property, plant and equipment	12,774,012	12,315,512
Employee costs	122,352,982	105,284,765
Amount expensed in respect of retirement benefit plans:	11,639,745	10,531,014
Defined contribution funds	11,639,745	10,531,014
Defined benefit funds	539,483	479,211
Bad debts written-off	-	137,212
Profit (loss) on sale of assets	(73,868)	(17,944)

19. Employee related costs

Basic	60,547,822	53,053,526
Performance Bonus	9,315,056	7,369,711
Medica laid - company contributions	4,663,210	4,419,440
UIF	468,235	407,887
SDL	1,047,196	880,200
PAYE	30,628,287	25,123,741
Pension fund - Defined benefit plan	539,484	479,211
Pension fund - Defined contribution plan	11,639,745	10,531,014
13th Cheques	3,503,947	3,020,035
	122,352,982	105,284,765

Figures in Rand	2016	2015
20. Bad debts		
Contributions to debt impairment provision	1,905,016	759,466
Debts impaired	-	137,212
	1,905,016	896,678
21. Investment revenue		
Interest revenue		
Short-term deposits	4,428,596	4,199,525
22. Finance costs		
Non-current borrowings	5,924,373	6,069,235
23. Auditors' fees		
Fees	1,433,883	1,166,583
24. Cash (used in) generated from operations		
(Deficit) surplus	(11,759,106)	10,260,698
Adjustments for:		
Depreciation and amortisation	12,774,012	12,315,512
Credit loss written off	-	137,212
Movements in operating lease assets and accruals	(28,273)	39,296
Movements in retirement benefit assets and liabilities	(617,085)	(1,463,706)
Movements in provisions	2,346,927	3,154,822
(Profit) Loss on assets written off	73,869	17,944
Gain-other financial liability	-	(264,051)
Changes in working capital:		
Receivables from exchange transactions	(14,446,249)	3,777,233
Other receivables from non-exchange transactions	(600,984)	129,930
Payables from exchange transactions	(251,666)	3,912,916
Unspent conditional grants and receipts	(5,966,781)	(6,825,457)
	(18,475,336)	25,192,349

Figures in Rand	2016	2015
25. Commitments		
Authorised capital expenditure		
Already contracted for but not provided for		
• Property, plant and equipment	-	432,128
• Other commitments and contractual amounts	18,312,534	10,446,163
• Operating leases	6,574,904	3,377,190
	24,887,438	14,255,481

This committed expenditure relates to plant and equipment and other contractual amount to be financed by available retained surpluses plus internal generated funds.

Operating leases - as lessee (expense)

Minimum lease payments due	2016	2015
- within one year	1,777,401	1,894,030
- in second to fifth year inclusive	4,797,503	1,483,160
	6,574,904	3,377,190

26. Contingencies

Matter

MNS Dawson/NNR	MNS Dawson instituted a claim against NNR relating to payment of service not completed	100,000
Mike Blumenthal – Mr. Blumenthal instituted proceedings in the CCMA against the NNR for unfair dismissal.	Mr. Blumenthal instituted proceedings in the CCMA against the NNR for unfair dismissal.	1,500,000
		1,600,000

27. Related parties

Relationships

Director's

Refer to note 28 on director's fees

Controlling entity

Department of Energy

Entities ultimately under common control

National Nuclear Energy Corporation of South Africa (NECSA)
 National Energy Regulator of South Africa (NERSA)
 National Energy Developm Institute of South Africa (SANEDI)
 National Radioactive-Waste Disposal Institute (NRWDI)
 The Petroleum,Oil and Gas Corporation of South Africa (PetroSA)
 Electricity Distribution Industry Holding (EDI Holding (Pty) Ltd
 Central Energy Group Fund (CEF) (Pty) Ltd

Post retirement pension for employees

NNR Pension Fund

Key management personnel

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**

NECSA	(441,660)	(345,397)
NECSA	13,485,175	24,204

Related party transactions**Services rendered to related party**

NECSA	40,777,406	36,408,398
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Figures in Rand	2016	2015		
Government transfer				
Department of Energy	21,847,000	33,697,000		
Services from related party				
NECSA	(2,347,456)	(2,944,277)		
Other				
NNR Pension Fund	12,179,229	11,010,225		
28. Directors' emoluments				
Executive				
2016				
	Basic salary	Performance bonus	Contributions	Total
Dr. M Tyobeka (CEO)	2,257,305	181,220	218,030	2,656,555
Mr. D Netshivhazwaulu(CFO)	1,481,386	194,961	123,702	1,800,049
Ms. A Simon-CCS Senior Manager	1,401,533	105,169	79,237	1,585,939
Ms. D Kgomo (CAE Senior Manager)	1,430,081	66,359	135,922	1,632,362
Mr. O Phillips (SARA Senior Manager)	1,614,874	213,649	201,590	2,030,113
	8,185,179	761,358	758,481	9,705,018
2015				
	Basic salary	Performance bonus	Contributions	Total
Dr. M.B Tyobeka (CEO)	2,063,226	70,000	204,977	2,338,203
Mr. D Netshivhazwaulu (CFO)	1,347,230	136,996	162,579	1,646,805
Ms. A Simon (CSS Senior Manager)	1,168,305	-	69,272	1,237,577
Ms Mbatha (CSS Senior Manager)	1,074,721	-	107,903	1,182,624
Mr. O Phillips (SARA Senior Manager)	1,400,314	105,090	179,207	1,684,611
	7,053,796	312,086	723,938	8,089,820

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.

Figures in Rand

2016 2015

Directors

2016

	Directors' fees	Total
Dr. T Cohen-(Chairperson)	45,784	45,784
Mr. T Mofokeng	92,473	92,473
Mr. S Kakoma	71,517	71,517
Mr. J Leaver	149,845	149,845
Mr. N Lesufi	111,550	111,550
Mr. S Mimi	68,111	68,111
Dr. T Motshudi	91,117	91,117
	630,397	630,397

Independent Technical Committee member

	Fees	Total
Dr B Sehlapelo	40,867	40,867

2015

	Directors' fees	Total
Dr. T Cohen-(Chairperson)	64,862	64,862
Mr. T Mofokeng	106,094	106,094
Mr. S Kakoma	100,069	100,069
Mr. J Leaver	132,350	132,350
Mr. N Lesufi	112,192	112,192
Mr. S Mimi	96,841	96,841
Dr.T Motshudi	118,646	118,646
Prof. G Sibya	16,140	16,140
	747,194	747,194

Independent Technical Committee member

	Fees	Total
Dr. B Sehlapelo	67,788	67,788

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 and liquidity 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.

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 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.

Credit risk

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

Trade receivables comprise of license and certificate holders by major reputable mining & scrap metal companies. Management evaluate credit risk relating to each license or certificate holder on an ongoing basis. 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.

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 NNR 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	10.50 %	12,377,343	12,377,343	12,377,343	12,377,343	15,471,678

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 28 of the National Nuclear Act,1999,(Act No. 47 of 1999).

30. Going concern

The audited 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 year ending 31 March 2015, and the current financial year ending 31 March 2016 as well as the budget over MTEF, 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. Fruitless and wasteful expenditure

The NNR incurred no fruitless and wasteful expenditure during the financial year under review.

32. Irregular expenditure

Add: Irregular Expenditure - current year	4,683	-
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During the year under review, the Board of Directors term came to an end and Management hosted a farewell banquet acknowledging the sterling leadership provided during its term. At this occasion, alcoholic beverages were served with the view that such occasion is covered in Treasury Instruction 01 of 2013/2014, paragraph 4.25. Management conceded on the hindsight when the matter was raised by the Auditor General that the occasion does not perfectly fit within the scope of the instruction.

Figures in Rand	2016	2015
33. Reconciliation between budget and statement of financial performance		
Reconciliation of budget surplus/deficit with the surplus/deficit in the statement of financial performance:		
Net (deficit) surplus per the statement of financial performance	(11,759,106)	10,260,698
Adjusted for:		
Loss on assets written-off	-	17,944
Credit loss written-off	-	137,212
Provision for doubtful debts	1,905,016	759,466
Provision for leave pay	558,752	813,933
Actuarial gain/loss	(617,085)	(1,463,706)
Gain-Other financial liability	-	(264,051)
Variance on authorisation fees	(3,703,573)	4,515,656
Variance on other income	(28,807)	(1,364,555)
Variance on investment income	(1,780,596)	(416,525)
Variance on compensation	7,087,126	(912,168)
Variance on goods and services	6,199,066	526,129
Variance on depreciation	7,433,292	(306,488)
Variance on finance cost	561,373	148,234
Variance on capital expenditure	(5,855,458)	(12,451,779)
Net surplus per approved budget	-	-

34. Budget differences

Material differences between budget and actual amounts

34.1 Authorisation fees

The authorisation fees for year is more by R 3.7 more than budgeted due to authorisation holders who are new and have been invoice for the first time during the current year.

34.2 Actuarial gain

34. Budget differences (continued)

Actuarial gain mainly result from the exist of one pensioner who opted out of the post retirement medical scheme and the obligation was settled.

34.3 Deferred income

Deferred income related to unspent conditional receipts for establishment of Regulator Emergency Control Center and Cape Town office accommodation projects. The total amount disbursed and realised as income amount to R 5.8 million for the period under review.

34.4 Interest received

Interest income is substantially higher than budgeted due to significant cash balance than targeted relating to unspent conditional grant, the disbursement of cash relating to the project was at a lower pace than anticipated resulting in high interest earned.

34.5 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 lab in the past financial year.

35.6 Debt impairment.

The increase in provision for doubtful debts can be attributed to the vacancy of legal council which impacted on legal efforts to collect from license holders.

35.7 Goods and services

The variance in goods and services can be attributed mainly to property rates amounting to R 2.4 million which was in dispute with the Municipality and was settled during the current year. As well as open purchase order from prior financial year.

SECTION 7

ACRONYMS &
GLOSSARY



ABBREVIATIONS/ACRONYMS

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

NDR	National Dose Register	RSR	Railway Safety Regulator
Necsa	South African Nuclear Energy Corporation	SALTO	Safety Assessment of Long-Term Operation
Nehawu	National Education, Health and Allied Workers' Union	SAMSA	South African Maritime Safety Authority
NEPROC	Nuclear Emergency Preparedness Regulatory Oversight Committee	SAPS	South African Police Service
NERS	Network of Regulators of Countries with Small Nuclear Programmes	SARA	Standards, Authorisations, Reviews and Assessments
NGO	Non-Governmental Organisation	SARS	South African Revenue Service
NIL	Nuclear Installation Licence	SAT	Self-Assessment Tool
NNR	National Nuclear Regulator	SCM	Special Case Mines
NNRA	National Nuclear Regulator Act	SGR	Steam Generator Replacement
NORM	Naturally Occurring Radioactive Material	SHEQ	Safety, Health, Environment and Quality Management
NTWP	Nuclear Technology and Waste Projects N	SHEQD	Safety, Health, Environment and Quality Management Department
UFCOR	Nuclear Fuels Cooperation of South Africa	SSRP	Safety Standards and Regulatory Practices
NUSSC	Nuclear Safety Standards Committee	SQEP:	Suitably Qualified and Experienced Person TPU: (Thermal Power Upgrade)
NVL	Nuclear Vessel Licence	TRANSSC	Transport Safety Standards Committee
PSM	Power Station Manager	TSO	Technical Support Organisation
QMS	Quality Management System	USNRC	United States Nuclear Regulatory Commission
OTS	Operating Technical Specification	WAC	Waste Acceptance Criteria
PFMA	Public Finance Management Act	WASSC	Waste Safety Standards Committee
PLEX	Plant Life Extension	WiNSA	Women in Nuclear South Africa
PPC	Parliamentary Portfolio Committee	WiN-NNR	Women in Nuclear National Nuclear Regulator
PSA	Public Safety Assessor	WCA	Wonderfonteinspruit Catchment Area
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		

GLOSSARY

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.

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 off-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 off-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 fission 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.



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