

PRESS RELEASE

15 December 2016

IAEA Mission Says South Africa's Nuclear Regulator is Effective, Sees Need for Improved Radiation Safety

Centurion, South Africa – An International Atomic Energy Agency (IAEA) team of experts said South Africa has a robust regulatory framework for nuclear safety but recommended improvements in the oversight of radiation safety.

The Integrated Regulatory Review Service (IRRS) team today concluded an 11-day mission to assess the regulatory framework for nuclear and radiation safety in South Africa. Regulatory responsibilities in the country are shared by the National Nuclear Regulator (NNR), which regulates the operation of nuclear facilities and fuel-cycle facilities, and the Directorate Radiation Control (RadCon) in the Department of Health (DOH), which regulates the use of radiation sources in medicine and industry.

“We found that the NNR is an effective regulatory authority with competent staff, a strong safety culture and solid infrastructure,” said team leader Victor McCree, Executive Director for Operations at the U.S. Nuclear Regulatory Commission.

He noted that RadCon lacked sufficient financial resources and staff to fully maintain its regulatory function. Welcoming a Government initiative to integrate the regulatory responsibilities of NNR and RadCon into one single authority, he called for its acceleration to further strengthen the country's regulatory oversight of nuclear and radiation safety.

Using IAEA safety standards and international good practices, IRRS missions are designed to strengthen the effectiveness of the national nuclear regulatory infrastructure, while recognizing the responsibility of each State to ensure nuclear and radiation safety.

South Africa's Koeberg Nuclear Power Station near Cape Town has two reactors that generate almost 5 percent of the country's electricity. The country also has one research reactor, several fuel cycle and waste management facilities and uranium mines. It also uses many radiation sources in medical and industrial applications.

The IRRS team of experts made recommendations and suggestions to the Government, the NNR and DOH to help them continue to strengthen nuclear and, in particular, radiation safety.

The team said in its preliminary findings that the NNR's strengths included clearly assigned roles and responsibilities, an initiative to promote and enhance safety and security culture, and thorough

inspections of all nuclear waste transports. The team recognised ongoing efforts to update the regulatory framework.

The 27-member IRRS team comprised experts from Argentina, Australia, Belgium, Brazil, Canada, Cuba, Finland, France, Germany, Hungary, India, Spain, Pakistan, the Republic of Korea, Romania, Sweden, Switzerland, the United Kingdom and the United States of America as well as four IAEA staff members.

NNR Chief Executive Officer Bismark Mzubanzi Tyobeka said the mission provided good insights and noted that its findings were similar to those identified by the NNR during a self-assessment that preceded the mission.

“Nuclear safety and security are global issues, and to open ourselves to such an intensive peer review mission by the IAEA attests to our commitment to transparency and our vision of becoming recognized as an independent world-class regulatory authority,” he said. “We welcome the observations and suggestions of the IAEA team and we will in the next three years embark on closing all the gaps and aim to invite an IRRS follow-up mission in 2020.”

The DOH Deputy Director General: Health, Regulation and Compliance Management, Anban Pillay, said: “Budget pressures have challenged the Department of Health’s ability to comply fully with global best practice. We have begun to address this issue through an initiative that would place regulatory responsibilities in a single authority with the ability to secure adequate funding.”

Team members reviewed documents and held discussions with officials from the NNR and RadCon, as well as the Department of Energy. They conducted site visits to the Koeberg Nuclear Power Station, the research reactor, a hospital, a uranium mine, fuel cycle facilities and waste management facilities. They also visited the NNR Regulator Emergency Response Centre and the NNR’s laboratory for environmental monitoring.

“By inviting and hosting its first IRRS mission, the South African Government has demonstrated that it takes its responsibility for nuclear safety seriously. This mission, thus far the most comprehensive in Africa, strengthens nuclear safety not only in the country, but also globally through the sharing of experiences and lessons learned,” said Greg Rzentkowski, Director of the IAEA’s Division of Nuclear Installation Safety.

He added that the mission result underscored the importance of the Government’s role in ensuring that the regulator is effectively independent in its structure and decision making.

The IRRS team identified good practices, including:

- The NNR’s scholarship and internship programme, which contributes to its recruitment of qualified and experienced staff.
- The NNR has required the operator of the research reactor to develop a detailed ageing management programme to demonstrate that it can continue to operate safely.

The mission provided recommendations and suggestions for improvements to the Government and the regulatory authorities – NNR and RadCon - including:

- The Government should ensure that the regulatory authorities are effectively independent by allocating adequate resources and ensuring that regulatory judgements and decisions can be made without undue influences that might compromise safety.
- The Government should develop a legal framework that addresses safety and its interface with security, including arrangements for safety and security of radioactive sources.
- The Government should establish a policy for decommissioning facilities and a process to develop waste management plans, as well as complete its plans to create a national fund for radioactive waste management.
- The regulatory authorities should develop and maintain regulations and guides consistent with international standards.
- The regulatory authorities should systematically collect and analyse operating experience.
- The regulatory authorities should systematically plan and prioritize inspections, and record and analyse inspection findings.
- The regulatory authorities should provide clear regulatory guidance for licensees on when to declare an emergency so that timely actions can be taken to protect the public and the environment from releases of radioactive material.

The final mission report will be provided to the South African Government within three months. Authorities told the IAEA they plan to make the report public in due time.