



CERTIFICATE OF REGISTRATION

IN TERMS OF THE NATIONAL NUCLEAR REGULATOR ACT, 1999 (ACT NO. 47 OF 1999)

CERTIFICATE OF REGISTRATION NO. COR-20

Certificate of Registration No. COR-20, is hereby granted by the National Nuclear Regulator (hereinafter referred to as the NNR) in terms of section 22 of the above Act

to

FOSKOR LIMITED (PHALABORWA)

Registration number:	51/02918/06
Registered address :	27 Selati Road PHALABORWA 1390

(hereinafter referred to as the holder)

subject to the terms and conditions set out herein.

PART 1

AUTHORISATION CONDITIONS

1.1 SCOPE

- 1.1.1 The holder is authorised to carry out activities associated with radioactive material as set out, and on the site as identified, in section 2.1 of this Authorisation.

1.2 HAZARD ASSESSMENT

- 1.2.1 Assessments, approved by the NNR, shall be conducted by the holder in respect of all the operations and activities involving radioactive material as set out in section 2.1 of this Authorisation and which could give rise to a risk of nuclear damage. The assessments must identify and quantify all potential radiation hazards:

1.2.1.1 to persons employed at or visiting the site

and

1.2.1.2 to members of the public.

- 1.2.2 Details of any proposed modification to existing facilities or amendment of any procedure or construction of any facility, which may have an effect on the risk of nuclear damage and which has not been addressed by the hazard assessments identified in section 2.2 of this Authorisation, together with a quantitative assessment of its impact on the risk of nuclear damage, shall be submitted to the NNR by the holder. Such proposals shall be approved by the NNR before being implemented.

1.3 OPERATIONAL LIMITATIONS

- 1.3.1 The limitations pertaining to normal operations and listed in section 2.3 of this Authorisation shall be adhered to.
- 1.3.2 No activities involving the demolition or disposal of any plant used for the processing of radioactive material shall be undertaken prior to approval by the NNR of the radiation hazard assessment and the radiation protection programme for such activities.

1.4 OPERATIONAL RADIATION PROTECTION

1.4.1 WORKFORCE

- 1.4.1.1 Based on the results of the assessments referred to in clause 1.2.1, programmes embodying all aspects as required by NNR documents RD-006: "Requirements for the Control of Radiation Hazards: Mining and Minerals Processing", and RD-011: "Requirements for Medical Surveillance and Control of Persons Occupationally Exposed to Radiation: Mining and Minerals Processing", in the revisions specified in section 2.4.1, must be established and be submitted to the NNR for approval. These programmes must ensure and demonstrate that radiation doses to persons employed at the site and to visitors to the site are in compliance with the radiation dose limitation system set down in the NNR document RD-010: "Requirements for Radiation Dose Limitation: Mining and Minerals Processing", in the revision specified in section 2.4.1 of this Authorisation. The programmes, as approved by the NNR, shall be implemented by the holder.
- 1.4.1.2 The provisions contained in the revision of documents listed in section 2.4.1 of this Authorisation and submitted in terms of condition 1.4.1.1 of this Authorisation, shall be adhered to.

1.4.2 PUBLIC

- 1.4.2.1 Based on the results of the assessments referred to in clause 1.2.1, programmes embodying all aspects as required by NNR document RD-007: "Requirements for Control over Radioactive Effluent Discharges and Environmental Surveillance: Mining and Minerals Processing", in the revision specified in section 2.4.2 of this Authorisation, must be established and be submitted to the NNR for approval. These must ensure and demonstrate that radiation doses to members of the public are in compliance with the radiation dose limitation system set down in the NNR document RD-010: "Requirements for Radiation Dose Limitation: Mining and Minerals Processing", in the revision specified in section 2.4.1 of this Authorisation. The programmes, as approved by the NNR, shall be implemented by the holder.
- 1.4.2.2 The provisions contained in the revision of documents listed in section 2.4.2 of this Authorisation and submitted in terms of condition 1.4.2.1 of this Authorisation, shall be adhered to.

1.5 RADIOACTIVE WASTE

- 1.5.1 A radioactive waste management programme embodying all the requirements contained in the NNR document RD-004: "Requirements for Radioactive Waste

Management: Mining and Minerals Processing", in the revision specified in section 2.5 of this Authorisation, shall be established and submitted to the NNR for approval.

- 1.5.2 The provisions contained in the revision of documents listed in section 2.5 of this Authorisation and submitted in terms of condition 1.5.1 of this Authorisation, shall be adhered to.

1.6 TRANSPORTATION

- 1.6.1 Transportation of radioactive material or of any equipment or objects contaminated with radioactive material off the site or on roads which are accessible to the public must be carried out in terms of the provisions of the Regulations for the Safe Transport of Radioactive Material of the International Atomic Energy Agency in the revision specified in section 2.6 of this Authorization.

For the purpose of compliance with this condition the National Nuclear Regulator is the National Competent Authority.

- 1.6.2 An annual report shall be submitted to the NNR detailing the number of consignments made during the preceding year, the radioactive content per consignment, the nature of the packaging and the names of the consignees.
- 1.6.3 The provisions contained in the revision of documents listed in section 2.6 of this Authorisation and submitted with regard to condition 1.6.1 of this Authorisation, shall be adhered to.

1.7 PHYSICAL SECURITY

- 1.7.1 A physical security system, approved by the NNR, which will prevent unauthorized access to areas containing radioactive material and will prevent the unauthorized removal of such material, shall be in place.
- 1.7.2 The provisions contained in the revision of documents listed in section 2.7 of this Authorisation and submitted in terms of condition 1.7.1 of this Authorisation, shall be adhered to.

1.8 OCCURRENCES

- 1.8.1 An occurrence reporting mechanism, approved by the NNR shall be established which will ensure that occurrences, including incidents and accidents as defined in the National Nuclear Regulator Act (Act No 47 of 1999), and as identified in the NNR document RD-012: "Notification Requirements for Occurrences: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation, are reported to the NNR by the holder in accordance with the

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provisions of that document and as specified by NNR document RD-009: "Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation.

- 1.8.2 An emergency plan, approved by the NNR, shall be established to make provision for any occurrence involving radioactive material which gives rise to, or has the potential to give rise to, an unplanned exposure to radiation in excess of the respective annual effective dose limits for persons employed on the site, visitors to the site, and members of the public. This plan shall comply with the requirements contained in NNR document RD-008: "Requirements for Emergency Preparedness: Mining and Minerals Processing", in the revision specified in section 2.8 of this Authorisation.
- 1.8.3 The provisions contained in the revision of documents listed in section 2.8 of this Authorisation and submitted in terms of condition 1.8.1 and 1.8.2, shall be adhered to.

1.9 QUALITY MANAGEMENT

- 1.9.1 All activities carried out within the scope of this Authorisation shall be subject to the requirements contained in the NNR document RD-005: "Quality Management Requirements for Activities Involving Radioactive Material: Mining and Minerals Processing", in the revision specified in section 2.9 of this Authorisation.
- 1.9.2 The provisions contained in the revision of documents listed in section 2.9 of this Authorisation and submitted in terms of condition 1.9.1 of this Authorisation, shall be adhered to.

1.10 SCHEDULE

- 1.10.1 The programme, scheduling the achievement of compliance with the conditions of this Authorisation, as set out in section 2.10 shall be adhered to.

This Certificate of Registration is effective from the date of issue.

Issued at Centurion on the 14th day of April 2003.



L/B ZONDO
CHIEF EXECUTIVE OFFICER

PART 2

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SECTION 2.1: SCOPE

2.1.1 The Authorised site is:

The surface area demarcated with the white line on the diagram headed "Licence NL-42 Plan of Licensed Site" as annexed to Controlled Copy 1 and Controlled Copy NNR of this authorisation.

2.1.2 The holder may, subject to the conditions in part 1 of this authorisation, use, possess, produce, store, and process radioactive material at and convey, cause to be conveyed and dispose of radioactive material from the site.

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SECTION 2.2: HAZARD ASSESSMENT

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| 2.2.1 | RAD/R/004 | (Rev 0) | Report on a Radiological Screening Survey of the Foskor Processing Plant. |
| 2.2.2 | RAD/R/9523 | (Rev 0) | Revision of a Report on a Radiological Screening Survey of the Foskor Processing Plant. |
| 2.2.3 | HAZ EXT 8 | (Rev 0) | Prospective Assessment of Potential Radiation Hazards to Workers of Extension 8, Foskor. |
| 2.2.4 | RISK-DSM-001 | | Risk assessment for the dismantling of the dismantling of the Heavy Minerals Plant Gravity Section. |

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SECTION 2.3: OPERATIONAL LIMITATIONS

- 2.3.1 Radioactive waste with a specific alpha (U-238, U-234, Th-230, Ra-226, Po-210, Th-232 and Th-228) activity exceeding 1000 Bq/g shall be stored in a facility approved by the NNR.

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SECTION 2.4.1: RADIATION PROTECTION PROGRAMME - WORKFORCE

2.4.1.1	RD-006	(Rev 0)	Requirements for the Control of Radiation Hazards: Mining and Minerals Processing.
2.4.1.2	RD-010	(Rev 0)	Requirements for Radiation Dose Limitation Mining and Minerals Processing.
2.4.1.3	RD-011	(Rev 0)	Requirements for Medical Surveillance and Control of Persons Occupationally Exposed to Radiation: Mining and Minerals Processing.
2.4.1.4	42A0075	(Rev 1.01)	Radiological Control Programme for the FOSKOR Heavy Minerals Plant (FOS-RPP-HMP-01)
2.4.1.5	PSZ-RP	(Rev 2.4)	Radiological Control Programme for the FOSKOR partially Stabilised Zirconia Plant (FOS-RPP-PSZ0-01)
2.4.1.6	FOS-RPF-01	(Rev 2)	Radiation Protection Function for Mining and Minerals Processing.
2.4.1.7	AMAD	(Rev 1)	Particle Size Analysis for Airborne Dust in the FOSKOR Baddeleyite Plant.
2.4.1.8	42A0052	(Rev 1.0)	Procedure for the Medical Surveillance of Employees Exposed to Occupational Radiation (FOS-MED-001)
2.4.1.9	FSO-RPP-PSZ-02	(Rev 0.0)	Demolition of a Baghouse in the partially Stabilised Zirconia Plant

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SECTION 2.4.2: RADIATION PROTECTION PROGRAMME - PUBLIC

2.4.2.1	RD-007	(Rev 0)	Requirements for the Control over Radioactive Effluent Discharges and Environmental Surveillance: Mining and Minerals Processing.
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SECTION 2.5: RADIOACTIVE WASTE

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|-------|----------------|-----------|--|
| 2.5.1 | RD-004 | (Rev 0) | Requirements for Radioactive Waste Management: Mining and Minerals Processing. |
| 2.5.2 | P-SY-07 | (Rev 0) | Site-Specific Project Proposal for the Monitoring, Segregation and Removal of Contaminated Scrap and Equipment as well as the Clean-up and Declassification of the Salvage Yard at Foskor. |
| 2.5.3 | FOS-WMP-SCO-01 | (Rev 1.0) | Prosedure vir Radiologiese Beheer van Herwinbare Komponente en Skroot by Foskor. |
| 2.5.4 | | (Rev 0) | Waste Management Programme. |

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SECTION 2.6: TRANSPORTATION

2.6.1 TS-R-1 (ST-1, Revised)

Regulations for the Safe Transport of
Radioactive Material 1996 Edition
(Revised).

2.6.2 FOS-TRP-BAD-001 (Rev 1)

Procedure for the Transport of
Baddeleyite Concentrate from Foskor
to Clients.

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SECTION 2.7: PHYSICAL SECURITY

2.7.1 FOS-PHS-001 (Rev 0)

Procedure for the Physical Security at
the Foskor Mine.

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SECTION 2.8: OCCURRENCES

2.8.1	RD-012	(Rev 0)	Notification Requirements for Occurrences: Mining and Minerals Processing.
2.8.2	RD-009	(Rev 0)	Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing.
2.8.3	RD-008	(Rev 0)	Requirements for Emergency Preparedness: Mining and Minerals Processing.
2.8.4	OCC1	(Rev 2.1)	Procedure for the Numbering, Classification and Responsibility of Reporting Occurrences involving Radioactivity.

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SECTION 2.9: QUALITY MANAGEMENT

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| 2.9.1 | RD-005 | (Rev 0) | Quality Management Requirements for Activities Involving Radioactive Material: Mining and Minerals Processing. |
| 2.9.2 | QMS | (Rev 1) | Foskor Quality Management System. |

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SECTION 2.10: SCHEDULE

2.10.1 SCHED

(Rev 9)

Schedule for Compliance with
Nuclear Licence NL-42, Foskor
Limited.

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