Certificate Of Registration

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

CERTIFICATE OF REGISTRATION NO. COR-164

Certificate of Registration No. COR-164, is hereby granted by the National Nuclear Regulator (hereinafter referred to as the NNR) in terms of section 22 of the above Act

to

SULZER PUMPS (SOUTH AFRICA) LIMITED

Registration number: 01/07245/06
Registered address : 9 Gerhardus Road
Elandsfontein
1406

(hereinafter referred to as the holder)
subject to the terms and conditions set out herein.

M T MAGUGUMELA
CHIEF EXECUTIVE OFFICER

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AUTHORISATION CONDITIONS
PART 1: GENERAL CONDITIONS

1.1 SCOPE

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

1.2 OPERATIONAL RADIATION PROTECTION

1.2.1 GENERAL

1.2.1.1 The holder must, appoint a Radiation Protection Officer and Radiation Protection Monitor each with an alternate and notify the NNR of their names.

1.2.1.2 The holder must appoint a Responsible Person and an alternate and notify the NNR of their names.

1.2.1.3 The Responsible Person must ensure compliance with the conditions of this authorisation.

1.2.1.4 The NNR must be informed immediately of any change of personnel mentioned in 1.2.1.1 and 1.2.1.2.

1.2.2 RADIATION PROTECTION PROGRAMME - WORKFORCE

1.2.2.1 The holder must adhere to the control measures listed in section 2.2 and the provisions contained in the revision of documents listed in section 2.2 of this authorisation.

1.2.2.2 The holder must, on an annual basis, submit a report on the doses received by the occupationally exposed workforce. Verification of these doses must be provided by a recognised Radiation Protection Specialist.

1.2.2.3 The holder must, on an annual basis, submit a revised medical surveillance protocol, or a motivation for maintaining the existing protocol, prepared by a Medical Practitioner who is registered with the South African Medical and Dental Council and who has successfully completed the appropriate training in radiation protection.

1.3 RADIOACTIVE WASTE

1.3.1 The holder must adhere to a radioactive waste management programme approved by the NNR in the revision mentioned in section 2.3. The radioactive waste management programme must embody all the requirements listed in section 2.3 of this authorisation.

1.3.2 A quarterly report must be submitted to the NNR summarising the information recorded in terms of the radioactive waste management programme.

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1.4 TRANSPORTATION

1.4.1 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 2.4 of this Authorisation.

For the purpose of compliance with this condition, the National Nuclear Regulator is the National Competent Authority as provided in the National Nuclear Regulator Act.

1.4.2 An annual report must 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.

1.5 PHYSICAL SECURITY

1.5.1 A physical security system, approved by the NNR, which prevents unauthorised access to areas containing radioactive material and the unauthorised removal of such material, must be in place.

1.6 ACCIDENTS AND INCIDENTS

1.6.1 The NNR must be notified of any accidents and incidents within the timescales required in terms of section 2.6 of this authorisation. Such notification must be carried out as in accordance with NNR document RD-009: "Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing", in the revision specified in section 2.6 of this authorisation.

1.7 QUALITY MANAGEMENT

1.7.1 The quality management provisions set out in section 2.7 of this authorisation must be complied with.

1.8 SCHEDULE

1.8.1 The actions and completion dates listed in section 2.8 of this authorisation, must be adhered to.

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

Issued at Centurion on the 02 day of JUNE 2008.

M T Magugumela
CHIEF EXECUTIVE OFFICER

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AUTHORISATION CONDITIONS
PART 2: SPECIFIC CONDITIONS

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5 May 2008

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SECTION 2.1: SCOPE

2.1.1 The authorised site is:

All the surface areas on the map titled "Sulzer (SA) Ltd proposed CSS-Roteg Service Centre on Erf 26, Henville Extension 5" submitted with the Application for a Certificate of Registration for Sulzer (SA) Ltd.

The authorised site is situated at: 9 Gerhardus Road, Elandsfontein, 1406.

2.1.2 The holder may, subject to the conditions in part 1 of this authorisation, refurbish equipment from mining and minerals processing facilities contaminated with radioactive scale material.

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SECTION 2.2: OPERATIONAL RADIATION PROTECTION

2.2.1 The areas where actions involving equipment contaminated with radioactive material are carried out, must be classified as Controlled Areas ("the areas") and the following control measures implemented:

2.2.1.1 The areas must be suitably demarcated and appropriate warning signs must be displayed at the access points to the areas.

2.2.1.2 Personnel whose duties require access to the areas must be designated as occupationally exposed person. Such personnel must:

- be eighteen years of age or older,
- be given instruction in the nature of radiation hazards, the principles of radiation protection and appropriate facility procedures controlling radiation hazards
- be medically examined in accordance with an approved protocol
- have their personal radiation doses assessed.

2.2.1.3 Health Register must be maintained in a form approved by the Regulator. Entries in the Health Register must be certified by an Appointed Medical Practitioner. This register must be retained by the licensee for a period of fifty years from the date of the last entry.

An employee, or a former employee must have right of access to his medical records and health register at all times.

After consent has been obtained from the employee or former employee, as the case may be, the licensee must, on the request of the NNR provide the access to the employee's medical records and health register. The NNR may, with the consent of the employee or former employee, as the case may be, appoint an independent medical practitioner to assist in the conduct of a review of said records.

2.2.1.4 A Radiation Dose Register which records the dose to occupationally exposed persons must be maintained. This register must be retained by the holder for a period of fifty years from the date of the last entry, unless otherwise directed by the NNR.

2.2.1.5 Personnel carrying out actions in the area must wear gloves, boots and overalls that may not be removed from the authorised site.

2.2.1.6 The holder must submit to the NNR, for approval, a programme to provide reasonable assurance that skin contamination on persons leaving the area, and prior to them eating, drinking and smoking, is

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removed to as low as reasonably achievable and in any case to below the following limits:

Alpha emitters	:	0.04 $Bq.cm^{-2}$
Beta and gamma emitters	:	0.4 $Bq.cm^{-2}$

(averaging over 300 cm^2 is permitted when monitoring for such *contamination*).

2.2.1.7 Activities in the areas must be carried out in such a manner as to minimise the spread of contamination.

2.2.1.8 Eating, drinking, smoking and loitering is not permitted in the areas.

2.2.1.9 On a quarterly basis, the Radiation Protection Monitor must conduct an open-probe, beta-gamma, on-contact survey of the areas on a 1 m^2 grid with a surface contamination monitor.

On an annual basis, the Radiation Protection Monitor must conduct an open-probe, beta-gamma, on-contact survey of the areas on a 5 m^2 grid with a surface contamination monitor.

Records of these surveillances must be maintained and kept.

2.2.1.10 The holder must submit to the NNR for approval, a surveillance programme for the purpose of individual dose assessment.

2.2.1.11 The holder must submit to the NNR for approval, a procedure to be followed in the event of the specified set-point of the drive-through gamma dose-rate monitor or other appropriate monitoring device being triggered, as well as all documentation related to the calibration and operation of the monitoring device.

2.2.1.12 The holder must maintain and keep a record of all the measurements taken by the drive-through bulk gamma dose-rate monitor or other appropriate monitoring device.

2.2.2 HA-SSA-06/05 (Rev 00) Hazard Assessment Report for Sulzer (SA) Ltd.

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SECTION 2.3: RADIOACTIVE WASTE

2.3.1 The radioactive waste management programme must make provision for:

2.3.1.1 the identification of wastes with a specific alpha (U-238, U-234, Th-230, Ra-226, Po-210, Th-232 and Th-228) activity concentration above and below 1000 Bq/g;

2.3.1.2 the collection of the radioactive waste;

2.3.1.3 the disposal and/or storage of the radioactive waste;

2.3.1.4 a system of record keeping which details the content of all packages of radioactive waste, the nature of the packaging material as well as the location of storage and/or disposal.

2.3.2 WMP-SSAL-06/05 (Rev 00) Waste Management Programme for the Management of Radioactively Contaminated Equipment at Sulzer (SA).

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SECTION 2.4: TRANSPORTATION

2.4.1 TS-R-1 (ST-1, Revised)		Regulations for the Safe Transport of Radioactive Material 1996 Edition (Revised)
2.4.2 TRS-SSA-06/05	(Rev 00)	Transport of Radioactive Material from the Mining and Minerals Processing Facilities at Sulzer (SA) Ltd.

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SECTION 2.5: PHYSICAL SECURITY

2.5.1 PHYSEC-SSA-06/05	Physical Security Programme.

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SECTION 2.6: ACCIDENTS AND INCIDENTS

2.6.1 The NNR must be notified forthwith of the following accidents and incidents:

2.6.1.1 transport accidents involving radioactive material;

2.6.1.2 triggering of the specified set-point of the alarm on the drive-through bulk gamma dose-rate monitor or equivalent monitoring device;

2.6.1.3 personal injury involving equipment contaminated with radioactive material;

2.6.2 RD-009 (Rev 0) "Verbal Emergency Communication with the National Nuclear Regulator: Mining and Minerals Processing".

2.6.3 ORN-SSA-06/05 (Rev 00) Occurrence Reporting and Notification Procedure for Sulzer (SA) Ltd.

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SECTION 2.7: QUALITY MANAGEMENT

2.7.1 The executive manager must define and issue a policy statement, which includes objectives for and commitment to safety and quality.

2.7.2 Compliance with authorisation conditions must be reviewed on an annual basis by executive management. During this review, non-compliance reports, corrective actions requests and records of any other performance related reporting mechanism shall be evaluated.

2.7.3 Documents related to the authorisation conditions in part 1 of this authorisation must be prepared and reviewed by competent personnel and authorised for implementation by an individual designated by the executive manager.

2.7.4 An approved document control system, for ensuring the correct utilisation of document revision must be established, documented, authorised and implemented.

2.7.5 Measures must be established, documented, authorised and implemented to ensure that non-compliances with authorisation conditions are identified, corrected and recorded.

2.7.6	QMP-SSA-06/05	(Rev 0)	Quality Management Programme for the refurbishment of Radioactively Contaminated Scrap at Sulzer (SA).

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SECTION 2.8: SCHEDULE

Scope	**Action**	**Completion**
GPS coordinates for the Authorised sit in the NNR format	Submission	July 2008

Worker Safety Assessment	**Action**	**Completion**
Safety Assessment for Surface Operations	Submission	Completed

Worker Radiation Protection Programme	**Action**	**Completion**
RP Programme,	Submission	Completed
6 Monthly dose reports for surface operations	Submission	End of July End of January (include summary for year)

Waste Management Programme	**Action**	**Completion**
Integrated radioactive waste management programme	Submission	Completed
Quarterly waste reports	Submission	End of April End of July End of October End of January (include summary for year)

Occurrences	**Action**	**Completion**
Occurrence Report	Submission	As appropriate

Quality Management	**Action**	**Completion**
Quality Management Programme	Submission	Completed
Self –Inspection Schedule and plan	Submission	July 2008

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