

**NOTICE 1398 OF 2006****NOTICE OF APPLICATION FOR A NUCLEAR INSTALLATION LICENCE IN TERMS OF SECTION 21(3) OF THE NATIONAL NUCLEAR REGULATOR ACT (ACT NO. 47 OF 1999)**

Notice is hereby given in terms of Section 21 of the National Nuclear Regulator Act (Act No 47 of 1999) that Pebble Bed Modular Reactor (Proprietary) Limited has made an application for a Nuclear Installation Licence. This Application supersedes the previous application published by Necsa.

A copy of the application is set out hereunder as Schedule A.

In terms of the provisions of Section 21 (4)(a) of the National Nuclear Regulator Act (NNRA) any person who may be directly affected by the granting of a nuclear installation or vessel licence pursuant to an application in terms of subsection (1) or (2) may make representations to the Board of the NNR, relating to health, safety and environmental issues connected with the application, within 30 days of the date of publication in the Gazette contemplated in Subsection (3)(b)

Publication in the Government Gazette was made on 29 September 2006.

Representations must be addressed to:

The Chief Executive Officer

National Nuclear Regulator

P O Box 7106

CENTURION

**0046**

Fax: (012) 663 5513/674 7822

**Schedule A:** The application for a Nuclear Installation Licence as submitted under FPA0018

**SCHEDULE A**

- (4) Not applicable
- (5) Physical address of the proposed installation:

Building B-D1, B-D2, B-CB and B-C5  
BEVA Site  
Church Street West  
PELINDABA  
0250

- (6) Postal Address of the Applicant:

PBMR Fuel Division Manager  
Lake Buena Vista Building  
1267 Gordon Hood Avenue  
PO Box 9396  
CENTURION  
0046

- (7) Description of the proposed nuclear installation:

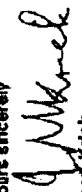
The proposed nuclear installation is for a plant that will manufacture fuel spheres and graphite spheres (non-fuel) for the proposed PBMR (Proprietary) Limited. The Pilot Fuel Plant will be operated by PBMR (Proprietary) Limited for a period of 10 years.

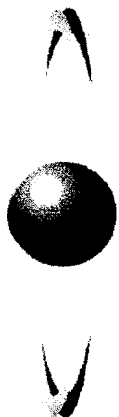
Chemical, ceramic, thermal and mechanical processes will be used for the manufacture of the fuel spheres. The fuel spheres will contain enriched uranium oxide, which is encapsulated in various pyrolytic carbon and silicon carbide coatings to form a coated particle of about 0.9 mm diameter. About 15 000 of these coated particles, together with graphite matrix material are then compressed into a sphere. This sphere is then encapsulated by a further 5.0 mm layer of graphite to form a final sphere containing 9 grams of uranium and 200 grams of graphite with a final diameter of 60 mm. The graphite spheres will be manufactured using similar thermal and mechanical processes to the fuel spheres and will be of similar size and weight.

The proposed plant is designed to produce fuel spheres containing 3.5 tons of up to 10% enriched uranium and 80 tons of graphite spheres per annum.

The proposed manufacturing plant will be installed in the buildings previously used and licensed to manufacture nuclear fuel for the Koeberg Pressured Water Reactor. With adaption to suit manufacture of the PBMR type fuel the existing buildings are therefore suitable for this proposed type of operation and conform to requirements for radiological processes.

The feed material for the fuel sphere will be U<sub>3</sub>O<sub>8</sub> powder that will be imported to South Africa at a suitable location and transported to the Pelindaba site. The manufactured fuel spheres will be transported from the Pelindaba site to the location where the PBMR technology will be situated (the first supply is currently planned for the demonstration PBMR on Koeberg site in the Cape Town Metropolitan Municipality, Western Cape Province).

Yours sincerely  
  
J. Mkhize  
Chief Executive Officer



**P B M R**  
**Pebble Bed Modular Reactor (Pty) Ltd.**  
Reg. No: 1999/17946/07

3rd Floor, Lake Buena Vista Building, 1267 Gordon Hood Avenue, Centurion, Republic of South Africa  
PO Box 9396 Centurion 0046 Tel (+27 12) 677-9400 Fax (+27 12) 663-3052/187971 677-9446

**OFFICE OF THE CEO**

17 July 2006  
Mr Maurice Magugumela  
Chief Executive Officer  
National Nuclear Regulator  
PO Box 7106  
Centurion  
0046

Dear Mr Magugumela,

**APPLICATION FOR A NUCLEAR INSTALLATION LICENCE FOR A PBMR FUEL MANUFACTURING PLANT**

In accordance with Section 21 of the National Nuclear Regulator Act 1999 (Act No. 47 of 1999), we hereby make an application for a nuclear installation licence for the prospective siting, construction, commissioning, operation, decontamination and decommissioning of a Pebble Bed Modular Reactor (PBMR) Fuel Manufacturing plant and for the transport of fuel fabrication material and fuel spheres.

In conformance with Government Notice No. R. 479 of 12 May 2000 and Regulations in terms of Section 47, read with Section 21 and 22 of the NNR Act 1999, the following information that is relevant to this application is hereby provided.

The numbering is as per Section 3 of the Regulation:

- (1) The application is for a nuclear installation licence
- (2) The applicant is PBMR (Proprietary) Limited. A juristic person as defined in terms of the Companies Act 71 of 1963 (as amended)
- (3) Physical Address of Head Office:

PBMR (Pty) Ltd  
Lake Buena Vista Building  
1267 Gordon Hood Avenue  
PO Box 9396  
CENTURION  
0046