



Canadian Nuclear Safety Commission  
Commission canadienne de sûreté nucléaire

P.O. Box 1046, Station B  
Ottawa, Ontario  
K1P 5S9

C.P. 1046, Succursale B  
Ottawa (Ontario)  
K1P 5S9

Fax: (613) 995-5086

Télécopieur : (613) 995-5086

Your file      Votre référence

## Directorate of Power Reactor Regulation

Our file      Notre référence

File # 4.02.02

June 18, 2010

Mr. F. Saunders  
Vice President  
Nuclear Oversight and Regulatory Affairs  
Bruce Power Inc.  
P.O. Box 1540, B10-4W  
177 Tie Road  
Tiverton, Ontario N0G 2T0

**Subject:      Request pursuant to Subsection 12(2) of the *General Nuclear Safety and Control Regulations*: Potential Alpha Exposure of Workers**

Dear Mr. Saunders:

Following analysis of the discovery of alpha contamination on the Bruce Restart Project, Bruce Power determined that some historical uptakes of alpha may have occurred in operating units involved in fuel handling. Given the potential alpha exposure of workers, I request, pursuant to my authority as a person authorized by the Commission for the purposes of subsection 12(2) of the *General Nuclear Safety and Control Regulations* that Bruce Power Inc. complete, no later than June 25, 2010, the following actions:

- provide the year-to-date and 5-year dose histories of, and obtain bioassay samples from all workers involved in the fuel handling and maintenance work groups to determine potential alpha exposures;
- conduct a characterization of the source term which may have contributed to alpha exposures for this group of workers;
- implement work controls to mitigate future potential alpha exposures for fuel handling and maintenance workers.

I further request that Bruce Power Inc. submit, no later than July 30, 2010, the following information:

- preliminary dose estimates of the potential alpha exposures for the affected work group;

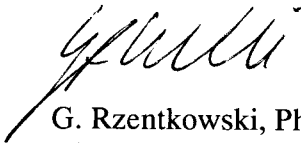
- methods, models and modeling assumptions used to ascertain worker doses from this alpha exposures related to fuel handling and maintenance activities; and
- results of review to determine if past fuel handling and maintenance activities may have resulted in personnel exposures to alpha hazards and develop a strategy to determine the magnitude of the exposures.

Please note that in accordance with subsection 12(2) of the *General Nuclear Safety and Control Regulations*, Bruce Power Inc. is also required to file a report by June 25, 2010, with the Commission that contains the following information:

- a) confirmation that the request will or will not be carried out or will be carried out in part;*
- b) any action that Bruce Power Inc has taken to carry out the request or any part of it;*
- c) any reasons why the request or any part of it will not be carried out;*
- d) any proposed alternative means to achieve the objectives of the request; and*
- e) any proposed alternative period within which Bruce Power Inc proposes to carry out the request.*

If you have any questions related to this matter, please do not hesitate to contact me by telephone at (613) 995-2655 or by e-mail at [Greg.Rzentkowski@cnsccsn.gc.ca](mailto:Greg.Rzentkowski@cnsccsn.gc.ca).

Yours truly



G. Rzentkowski, PhD  
Director-General  
Directorate of Power Reactor Regulation

c.c.:

R. Jammal, L. Thiele, P. Thompson, K. Lafreniere (CNSC)