



Atomic Energy
of Canada Limited

Commercial Products

P.O. Box 6300
Ottawa, Canada
K2A 3W3

L'Énergie Atomique
du Canada, Limitée

Produits Commerciaux

C.P. 6300
Ottawa, Canada
K2A 3W3

Applicant	000621 (3L)
Book No.	40
Type of Fee	Amendment
Date Check	2/26/81
Received By	Brown
Tel. (613) 592-2790	
Telex. 053-4162	

File: Q2.3.1
RA81.2.340

1981 February 16

Mr. Paul Guinn,
License Management Branch,
Division of Fuel Cycle and
Material Safety,
U.S. Nuclear Regulatory Commission,
Washington, D.C. 20555
U.S.A.

Dear Mr. Guinn:

REQUEST FOR LICENSE AMENDMENT
USNRC MATERIALS LICENSE NO. 12-18482-01

Please consider this our formal application for amendment
of the subject license as follows:

Item 2 - Change site address from 2610 Greenleaf Avenue
to 2600 Greenleaf Avenue. Item 2 in amended
form will read: 2600 Greenleaf Avenue
Elkgrove Village,
Illinois 60007

Condition 12 - Add the name R.D. Foss. Change the name
E.R. Ridout to E.F. Ridout (typographical error
only). Item 12 in amended form will read:
Licensed material shall be
used by or under the supervision
of R.H. Tanker, E.F. Ridout or
R.D. Foss.

Add Condition 16 - Radioactive material shall be stored
under the supervision of the District Service
Manager R.S. Johnson, (R.P.O.).

To support the request for the change in Item 2, we submit
calculated individual exposures, Appendix A, and a floor
plan, Appendix B, of the new location. These demonstrate
that an individual is not likely to receive a whole body dose
in excess of 0.5 rem in any one calendar year.

B103260868

COPIES SENT TO OFF. OF
ACTION AND ENFORCEMENT

06896

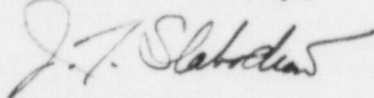
An AECL-CP letter of certification, Appendix C, with a recent source transfer and installation record for R.D. Foss, Appendix D, is attached in order to justify the amendment to Condition 12.

Condition 16 is supported by a resume of the duties which have been carried out by R.H. Johnson, Appendix E.

We are pleased to enclose our cheque in the amount of \$40.00 (U.S. Funds), in favour of the Commission to cover the fee for this service.

We trust that this information is complete and satisfactory.

Yours sincerely,



J.T. Slobodian
Regulatory Affairs
Quality Assurance

encl.

c.c. R.H. Tanker
R.D. Foss
R.S. Johnson
M.G. Brown
E.F. Ridout

/bdo

APPENDIX A

CALCULATIONS OF INDIVIDUAL EXPOSURES CHICAGO SERVICE CENTRE

The following calculations will demonstrate that any individual working in the office "D" is not likely to receive a whole body dose in excess of 500 mrem in any one calendar year. (Reference 10CFR part 20 section 20.105).

Distance of storage area to office = 60 feet or 18.3 metres. Maximum exposure period in one year = $5 \times 52 \times 8 = 2080$ hours. An individual residing in office "D" for 2080 hours would be exposed to the maximum allowable yearly dose of 0.5 rem IF stored radioactive materials had an exposure rate of:

$$\frac{500}{2080} \times 18.3^2 = 80.5 \text{ millirem(mrem) per hour at one}$$

metre distance from the surface of the radioactive container.

A therapy head used as a storage container is permitted an average dose rate of 2 mrem per hour at one metre. This amounts to approximately one fortieth of the permissible annual whole body dose. (Reference NCRP-33 par. 4.2.2).

A shipping container is permitted a maximum dose rate of 10 mrem per hour at one metre. (Reference 49 CFR par. 173.393(i)). This amounts to approximately one eighth of the permissible annual whole body dose.

In addition, consider point 'A' in the parking lot and note:

- (i) The 12 inch (30 cm) solid concrete block wall has a transmission factor of 0.06. (Reference NCRP report # 49 Fig. 12).
- (ii) A shipping container with radioactive material contents stored one metre from point "A".

APPENDIX A (cont'd)

- (iii) A random occupancy of five minutes per day at point "A".

$$\text{Time accumulated at point "A"} = \frac{5}{60} \times 5 \times 50$$

$$\begin{aligned} \text{Absorbed dose at point "A" over one year} \\ = 20.8 \times 10 \times 0.06 = 12.48 \text{ mrem.} \end{aligned}$$

This amounts to approximately one fortieth of the permissible annual whole body dose.



ADIX B

ING LOT

POINT 'A'

NOTE: WINDOWS LOCKED
6'6" ABOVE FINISHED
FLOOR.

12" SOLID
MASONRY
BLOCK

PARTS
STORAGE
AREA

CONTAINER
STORAGE

LOCATION AT
REQUEST OF
LOCAL FIRE
DEPT.

WAREHOUSE

60'

PARKING LOT

9'x12" OVERHEAD DOOR

8" SOLID MASONRY BLOCK

HEAVY STORAGE AREA

TI
APERTURE
CARD

DOCK & DOOR
4' ABOVE GRADE
DOORS LOCKED

Also Available On
Aperture Card

8103260868-01

BUILDING 9	SCALE 1/8" = 1'0"	REVISED	EXHIBIT "A" ATOMIC ENERGY OF CANADA LTD. 2600 GREENLEAF AVENUE ELK GROVE, ILLINOIS	DWG. NO. Q2.3.1 (c)
SUITE NO 2600	DATE 5-27-80		CLIENT APPROVAL	SHEET
ENTERPRISES	DRAWN BY		DATE	