

14002-2-2-40

P.1

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File Cover No. Sp. 2895

With Tip-Back Holder Pat. No. 361978

MacMillan Office Appliances Co., Ltd.

809 Athlone Ave., OTTAWA, CAN.

File No. 14002-2-2 Vol. ONE

NOV 1 1963

FILE NO.

14002-2-2-40

PLEASE KEEP ATTACHED TO TOP OF FILE

FILE CLOSED

THIS FILE IS TO BE USED FOR
REFERENCE PURPOSES ONLY.

ALL FURTHER CORRESPONDENCE
IS TO BE PLACED ON THE
APPROPRIATE FILE WITHIN
THE NEW FILE SERIES.

65-10-1

DEPARTMENT OF EXTERNAL AFFAIRS, CANADA.

NUMBERED LETTER

TO: THE UNDER-SECRETARY OF STATE FOR
EXTERNAL AFFAIRS, OTTAWA, CANADA.

FROM: Canadian Embassy
Washington

Reference:

Subject: Export Controls - International Years of
the Quiet Sun

Security: UNCLASSIFIED

No: 427

Date: March 26, 1963

Enclosures: 3

Air or Surface Mail:

Post File No: *W.D. File*

Ottawa File No.	
14002-2-2	
<i>oo</i>	<i>dy</i>

References

TO: [Signature]
EX
MA 29 1963
REGISTRY

The enclosed letter from the U.S. Department of Commerce indicates that the United States has no objection to the export from Canada of specially-designed neutron detectors, manufactured in Canada but containing isotopically enriched boron trifluoride of U.S. origin. These instruments are to be used for detection of cosmic rays as part of an international research program to be conducted in countries of the Free World and the Soviet European Bloc.

2. Additional copies of the letter are provided for forwarding to the Department of Trade and Commerce, the Atomic Energy Control Board, and the National Research Council which is concerned with the Canadian portion of the IQSY program.

[Signature]
 The Embassy

*Refer copy to
 T & C
 AECB
 WRC
 [Signature]*

Internal Circulation

F

Distribution to Posts

EXTERNAL AFFAIRS
REGISTRY

MAR 28 11 04 AM '63

47

TO: THE SECRETARY OF STATE
FROM: THE ATTORNEY GENERAL
SUBJECT: [Illegible]

RE: [Illegible]
[Illegible text block]

U.S. DEPARTMENT OF COMMERCE
BUREAU OF INTERNATIONAL PROGRAMS
WASHINGTON 25, D.C.

IN REPLY REFER TO:

MAR 1 8 1963

Mr. Roger Parlour
Commercial Counselor
Canadian Embassy
1746 Massachusetts Avenue, N.W.
Washington, D. C.

Dear Roger:

Mr. Stanley Rittenberg, Executive Secretary, IQSY Committee (International Years of the Quiet Sun 1964 - 1965) of the National Academy of Sciences, National Research Council recently acquainted this office with certain aspects of the forthcoming international program relating to cosmic rays which appeared to involve U.S. and Canadian export control arrangements.

Briefly the problem revolves about the prospective reexport from Canada to numerous Free-World installations, and eventually some European Soviet Bloc installations, of neutron detectors manufactured in Canada, but which employ isotopically enriched boron trifluoride (BF_3) of U.S. origin. This type neutron monitor equipment represents a recent development by Dr. Carmichael, Atomic Energy of Canada, Ltd., which makes it possible to increase substantially the counting rate of a monitor. This is of special interest to the IQSY since cosmic-ray effects are likely to be small at this time and only with high counting rates can one study these small variations. The IQSY Committee has strongly endorsed that these super monitors be installed on a minimum network basis. Many countries have already shown an interest in obtaining the super monitors for installation in stations which they will establish. Other countries, including Soviet Bloc countries, will undoubtedly show a similar interest.

Naturally, the IQSY Committee wishes to avoid whatever export control problems which may be involved concerning (1) reexport from Canada of goods incorporating U.S. origin materials, and (2) possible implications of international (COCOM) clearances.

OEC technicians have examined the technical aspects of this problem, in consultation with Department of Defense and AEC representatives. The conclusion reached is that the U.S. origin boron trifluoride, when incorporated in neutron detector tubes, loses its identity as a product to be controlled per se. Accordingly, what is then a matter of control, in the opinion of U.S. technicians, is a neutron monitor tube which is not presently included on any international embargo lists.

MAR 18 1963

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Accordingly, the Department of Commerce raises no objection to the reexport from Canada to destinations in the Free-World or to European Soviet Bloc destinations of neutron monitors incorporating U.S. origin boron trifluoride for use in connection with the IQSY Program. You may wish to pass this finding on to the Canadian Trade and Commerce Department and perhaps to the Canadian Atomic Energy Control Board, both of which Dr. Carmichael felt would have problems obtaining U.S. Government clearances. Our information is that Electronic Associates Limited, Willowdale, Ontario is the manufacturer of the counters and would, therefore, be the applicant for Canadian export permits.

Very truly yours,

Edward P. Malinsky
Director
Policy Planning Division



J4

File 10/2

IN YOUR REPLY PLEASE QUOTE

FILE NO. 15-15-A1
11-15-1

ATOMIC ENERGY CONTROL BOARD
P.O. BOX 1046
OTTAWA, CANADA

July 11th, 1962.

1400 2-13-2
3161

TO: Miss Burwash
JUL 12 1962
REGISTRY

Under Secretary of State for External Affairs,
East Block,
Ottawa, Ontario.

Attention: Miss H.D. Burwash, Economic Division

This will confirm our telephone conversation of to-day in which you advised that your Department has no objection to the exhibit by Atomic Energy of Canada Limited of one AECL Gammacell 220 containing a 5500 curie Cobalt 60 source at the BRNO International Trade Fair, BRNO Czechoslovakia. Accordingly the Board has approved the export permit application authorizing AECL to make shipment of this equipment and source.

Under the present arrangement, this unit and source is to be returned to Canada. However, it may be sold, if it is the Board will insist that a radioisotope licence be obtained before transfer is made to the customer.

Yours very truly,

J. I. Clark
J. I. Clark,
Administrative Officer.

July 11th

E

NO ENCLOSURES

1962 JUL 12 AM 11:23

DEPARTMENT OF EXTERNAL AFFAIRS
CROSS REFERENCE SHEET

Security *Unclass*

14002-2-2		
62	-	-

Type of Document..... *Telegrams* No. *E591* Date. *MAR 27/61*

From..... *External - Ottawa*

To..... *London*

Subject: *UK - Canada Uranium contracts*

Original on File No. *14002-2-6*

Copies on File No. *NIL*

Other Cross Reference Sheets on..... *14000-1*

Prepared by..... *[Signature]*

[Handwritten initials]

DEPARTMENT OF EXTERNAL AFFAIRS
CROSS REFERENCE SHEET

Security *Unclassified*

14002-2-2		

Type of Document..... *Letter* No. *214* Date *May 27 1958*

From..... *Berne, Switzerland*

To..... *Dept. of External Affairs*

Subject:

Swiss regulations governing manufacture and export of arms.



Original on File No..... *11044-A-40*

Copies on File No..... *-*

Other Cross Reference Sheets on..... *-*

Prepared by..... *J. Desjardins*

Defence Liaison (1)/WHBarton/4b

Ottawa, October 6, 1955.

14002	2-2
71	✓

The Secretary,
Atomic Energy Control Board,
No. 7 Building,
Ottawa, Ontario.

Export Controls

I refer to your letter of September 27, 1955, concerning the relaxation of Canadian Export Permit Regulations so as to permit certain atomic energy items to be exported to the United States without an export permit.

2. This Department has no objection to your proposal to arrange with the Department of Trade and Commerce to revise the export control list and I agree with you that the decision with respect to the export of these items to countries other than the United States could be dealt with administratively between the Atomic Energy Control Board and the Department of Trade and Commerce.

W. H. BARTON

for the

Under-Secretary of State
for External Affairs.



File WMB

IN YOUR REPLY PLEASE QUOTE

FILE NO. 23-1-4

ATOMIC ENERGY CONTROL BOARD

OTTAWA, CANADA
P.O. BOX 1046

14002-2-2

September 27, 1955.

~~50219-S-40~~
~~139 | 50~~

Under-Secretary of State
for External Affairs,
O T T A W A.

Attention Mr. W. H. Barton

Re: Export Control

Def S/R
Please see if
you can find the
letter of 12 Sep. mentioned
here. If you haven't got
it, it may be in an
Economic Dir. file
WMB

This refers further to letter, dated the 6th instant, from Mr. Lyall Johnson, of the United States Atomic Energy Commission, Licensing Branch, a copy of which I sent you with a copy of my letter of the 12th instant to Mr. W. Gibson-Smith, of the Foreign Trade Service, Department of Trade and Commerce.

Chalk River has advised that there appears to be no objection to relaxation of the Canadian Export Permit Regulations so as to permit the items mentioned in Mr. Johnson's letter to be exported to the United States without Export Permit. The Atomic Energy Control Board, at its meeting on the 26th instant, agreed that this relaxation would be desirable.

I propose, therefore, subject to your views, to ask the appropriate officers of the Department of Trade and Commerce to arrange that the Export Control List, which I understand is now under revision, be changed accordingly.

It has been suggested that with regard to export of the items in question to countries other than the United States the decision might be left with the Department of Trade and Commerce rather than having applications referred to the Board. This, I think, should probably be dealt with as an administrative matter, having regard to the terms of the new

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28 SEP 1955

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Under-Secretary of State
for External Affairs

September 27, 1955.

Export Control List, and the possible difficulty of identification of particular shipments as coming within the Export Control List items in question.

I should be glad to have your comment on these proposals.

Attached for your information is a copy of the United States Atomic Energy Commission Press Release of the 9th instant giving the detail of the action taken in the United States.



G. M. Jarvis,
Secretary.

GMJ/b
Enc.

UNITED STATES
ATOMIC ENERGY COMMISSION
Washington 25, D.C.

FILE COPY

No. 690
Tel. ST 3-8000, ext. 307

FOR IMMEDIATE RELEASE
FRIDAY, SEPTEMBER 9, 1955

AEC REMOVES EXPORT CONTROLS ON ATOMIC ENERGY FACILITY
COMPONENTS

The Atomic Energy Commission has formally amended, effective September 26, 1955, the AEC facilities regulations to provide for the elimination of existing controls applicable to components of production and utilization facilities. The principal effect of this action is to remove AEC export licensing controls with respect to certain electrical, industrial, and scientific instruments and equipment items useful in atomic energy work.

The items involved in this action as announced by the Department of Commerce on September 8, are radiation detection and measurement instruments, mass spectrometers and mass spectrographs, large vacuum diffusion pumps, and certain types of electromuclear machines.

This action by the Commission is in accordance with plans announced on April 12, 1955, and published in the Federal Register on April 15, 1955, as part of the Commission's Notice of Proposed Rule Making relating to its proposed regulations for production and utilization facilities. The other aspects of the proposed facilities regulations, together with comments received from the public concerning them, are still under Commission review.

The Commission has been informed that the Bureau of Foreign Commerce, U.S. Department of Commerce, will concurrently institute export licensing controls with respect to most of these items due to their potential strategic applications.

(NOTE TO EDITORS AND CORRESPONDENTS: Attached is a complete list of the equipment and instrument items removed from AEC control by this regulation amendment.)

1. Radiation detection instruments, and their major components, designed, or capable of being adapted, for detection or measurement of nuclear radiations, such as alpha and beta particles, gamma radiation, neutrons and protons, including the following:
 - a. Geiger Mueller, proportional, or parallel plate counter scalers.
 - b. Geiger Mueller or proportional counter rate meters.
 - c. Scalers (adaptable to radiation detection).
 - d. Geiger Mueller, proportional audio, or mechanical detectors.
 - e. Integrating ionization chamber meters and ionization chamber rate meters.
 - f. Geiger Mueller, proportional, or parallel plate counter detector components.
 - g. Electrometer tube circuits and dynamic condenser electrometers (vibrating reed, vibrating diaphragm, etc.) capable of measuring currents of less than 1 micromicroampere.
 - h. Counter pulse rate meters.
 - i. Amplifiers designed for application in nuclear measurements, including linear amplifiers, preamplifiers and distributed (chain) amplifiers.
 - j. Geiger Mueller quenching units.
 - k. Geiger Mueller or proportional coincidence units.
 - l. Dosimeters and electrometers, pocket and survey types, including electroscopes incorporating radiation measurement scales.
 - m. Chambers, pocket type, with electrometer charger-reader.
 - n. Electrometer tubes designed to operate with grid currents of less than 0.1 micromicroampere.

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- c. Resistors, values above 1,000 megohms.
 - p. Scintillation counters incorporating a photomultiplier tube.
 - q. Photomultiplier tubes having photocathode sensitivity of 10 or more microamperes per lumen, and an average amplification greater than 10^5 .
2. Mass spectrometers and mass spectrographs, of all mass ranges, and their major components, including the following:
 - a. Leak detectors, mass spectrometer, light gas type.
 - b. Mass spectrometers or mass spectrographs.
 - c. Ion sources, mass spectrometer or spectrograph type.
 - d. Acceleration and focussing tubes, mass spectrometer and spectrograph types.
 - e. Ionization chambers, mass spectrometer detector types.
 - f. Micromicroammeters capable of measuring current of less than 1.0 micromicroampere.
 - g. Electrometer tubes designed to operate with grid currents of less than 0.1 micromicroampere.
 - h. Resistors, values above 1,000 megohms.
3. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at the inlet jet).
4. Electronuclear machines, and their basic component parts, capable, with or without modification, of sustaining potential differences in excess of 100,000 volts against the discharging action of positive ion currents in excess of 10^{-7} amperes, such as belt type electrostatic generators (Van de Graaff machines).

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file 124

File WMB

September 12, 1955.

SEP 13 1955

Dr. G. O. Baines,
Research and Development,
Atomic Energy of Canada Limited,
CHALK RIVER, Ontario.

Dear Doctor Baines:

I attach copy of letter dated the 6th instant from Mr. Lyall Johnson, Chief of the Licensing Branch, Division of Civilian Application of the U.S.A.E.C. The letter is, I think, self-explanatory, though you probably have copies of the documents referred to.

You may recall that in July we were asked to comment on a draft export control list and did so. It appears that the Division of Trade and Commerce concerned has a new Director, that the new list has not yet been approved, and that the new Director is not too clear about what ought to be done. I am sending a copy of the Washington letter to him and enclose copy of my covering letter.

If Mr. Johnson's suggestion is adopted, our export control list will have to provide that export permits will not be required for export of the items in question to the United States but will be required for export to other countries, and that in relation to export to other countries the applications will be referred to the Board. The mechanics can, I suppose, be worked out with Trade and Commerce.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ/b
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30 SEP 1955

1955 SEP 13 PM 2:24

TO THE DIRECTOR, CANADIAN CUSTOMS SERVICE
FROM THE DIRECTOR, CANADIAN CUSTOMS SERVICE
SUBJECT: [Illegible]

RE: [Illegible]
[Illegible text]

IT IS THE POLICY OF THE CUSTOMS SERVICE
TO [Illegible]
[Illegible text]

20 SEP 1955

[Illegible text]

[Illegible text]

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71 | ✓

23-1-4

Yours: 3.6.1

September 12, 1955.

W. Gibson-Smith, Esq.,
Director, Transportation &
Trade Services Division,
Foreign Trade Service,
Department of Trade and Commerce,
O T T A W A.

Dear Sir:

I enclose for your information a copy of the letter, dated the 6th instant, from Mr. Lyall Johnson, Chief, Licensing Branch, Division of Civilian Application, United States Atomic Energy Commission, that I mentioned to you over the telephone.

I am taking up with Chalk River the questions raised by Mr. Johnson's suggestion and hope to be able to communicate further with you very shortly.

I understand that the revision of the export control list, which was under discussion when I wrote Mr. Bissonnet in July, has not yet been completed, and trust that it will be possible to arrange matters so that the change suggested by Mr. Johnson, if it proves to be desirable, can be incorporated in the next list.

Yours faithfully,

G. M. Jarvis,
Secretary.

GMJ/b

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30 SEP 1955

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

J-5

September 6, 1955

Mr. G. M. Jarvis
Secretary
Atomic Energy Control Board
Ottawa, Canada

14002-2-2
71 | ✓

Dear Mr. Jarvis:

As you are probably aware, the Atomic Energy Commission has published a draft revision of its so-called "facilities regulations" with the view of bringing its licensing controls with respect to facilities in line with the provisions of the Atomic Energy Act of 1954. A copy of this draft regulation is enclosed for your information.

You will observe that the Commission expressed the intention at that time of dropping its existing export controls over "components" of production and utilization facilities. Even though the Commission is not yet ready to promulgate the entire regulation revision, it has been decided to move ahead immediately on the components aspect. Within the next few days we are publishing in the Federal Register an amendment to the existing regulation, to become effective September 26, 1955, resulting in AEC's dropping its export controls over components.

Concurrently with this AEC action, the U. S. Department of Commerce is placing these items on the Department's "Positive List of Commodities." The effect of the Department's action will be a requirement that exporters must thereafter obtain a Department of Commerce export license to export these items.

However, as you are aware, the Department of Commerce export regulations do not apply to shipments made from the United States to Canada. Therefore, on and after September 26, 1955, the movement of these items to Canada will not be subject to export licensing requirements by any U. S. agency.

The items concerned fall into the following categories:

1. Radiation detection and measurement instruments and important component parts.
2. Mass spectrometers, mass spectrographs, mass spectrometer type electric detectors and important component parts.

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30 SEP 1955

Mr. G. M. Jarvis

- 2 -

September 6, 1955

3. Vacuum diffusion pumps, 12 inches or greater in diameter at the inlet jet.
4. Electronuclear machines, such as Van de Graaff machines, in the range between 100,000 to 1,000,000 electron volts. (Electronuclear machines, positive ion types, in excess of 1 Mev. continue for the time being under AEC export control regulations. At such time as the AEC promulgates its new facilities regulation, it is anticipated that electronuclear machines will not be considered, for the purposes of the AEC regulations, to be production or utilization facilities. In this event the Department of Commerce would then add electronuclear machines over 1 Mev. to its Positive List.)

I recall that several years ago we exchanged correspondence which resulted, I believe, in your taking steps at that time to see that the U.S. and the Canadian export controls on items of this nature were essentially in parallel to each other. In view of the action being taken by the Commission effective September 26, you may wish to give consideration to this parallel aspect again. In this connection, I am sure that the action being taken by the Commission will greatly facilitate the movement back and forth of U. S. and Canadian prospectors who include radiation instruments among their equipment items. It is very probable that parallel Canadian action would also be helpful in this respect.

The specific items being dropped from AEC export controls on September 26 are listed under Part 50.71 of the enclosed printed regulation.

Please let me know if we can provide you with any further information you may need relating to this Commission action.

Sincerely yours,

"Lyall Johnson"

Lyall Johnson
Chief, Licensing Branch
Division of Civilian Application

Enclosure:
AEC Regulation, Part 50

AEC

UNITED STATES
ATOMIC ENERGY COMMISSION
Washington 25, D. C.

14-002-2-2	
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No. 690
Tel. ST 3-8000, ext. 307

FOR IMMEDIATE RELEASE
FRIDAY, SEPTEMBER 9, 1955

*Encl. to T. S. of Sept 12/55 from Wash. on
7949-A-40*

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- 2 -

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 - b. Geiger Mueller or proportional counter rate meters.
 - c. Scalers (adaptable to radiation detection).
 - d. Geiger Mueller, proportional audio, or mechanical detectors.
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 - f. Geiger Mueller, proportional, or parallel plate counter detector components.
 - g. Electrometer tube circuits and dynamic condenser electrometers (vibrating reed, vibrating diaphragm, etc.) capable of measuring currents of less than 1 micromicroampere.
 - h. Counter pulse rate meters.
 - i. Amplifiers designed for application in nuclear measurements, including linear amplifiers, preamplifiers and distributed (chain) amplifiers.
 - j. Geiger Mueller quenching units.
 - k. Geiger Mueller or proportional coincidence units.
 - l. Dosimeters and electrometers, pocket and survey types, including electroscopes incorporating radiation measurement scales.
 - m. Chambers, pocket type, with electrometer charger-reader.
 - n. Electrometer tubes designed to operate with grid currents of less than 0.1 micromicroampere.

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- o. Resistors, values above 1,000 megohms.
 - p. Scintillation counters incorporating a photomultiplier tube.
 - q. Photomultiplier tubes having photocathode sensitivity of 10 or more microamperes per lumen, and an average amplification greater than 10^5 .
2. Mass spectrometers and mass spectrographs, of all mass ranges, and their major components, including the following:
- a. Leak detectors, mass spectrometer, light gas type.
 - b. Mass spectrometers or mass spectrographs.
 - c. Ion sources, mass spectrometer or spectrograph type.
 - d. Acceleration and focussing tubes, mass spectrometer and spectrograph types.
 - e. Ionization chambers, mass spectrometer detector types.
 - f. Micromicroammeters capable of measuring current of less than 1.0 micromicroampere.
 - g. Electrometer tubes designed to operate with grid currents of less than 0.1 micromicroampere.
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- 30 -

DEPARTMENT OF EXTERNAL AFFAIRS

MEMORANDUM

TO: ~~Mr. A. E. Ritchie~~

Security ~~SECRET~~

Date June 7, 1954

FROM: Defence Liaison (1) Division

File No.		
50219-S-40		
6		6

REFERENCE:

SUBJECT: Review of Restrictions on Export of Atomic Materials to Iron Curtain Countries

Following our conversation last week I spoke to Mr. Jarvis, of the Atomic Energy Control Board, who said that he thought that somebody from the Board would be able to go to Washington to take part in the discussions. He called me again on June 4 to say that he had received unofficially from a U.S. official a list of commodities that are to be discussed and an intimation that it was hoped to have the discussions in Washington about the middle of June.

Benjamin Rogers
Defence Liaison (1) Division

Mr. Jones
You might mention to Harvey or Bismuth or Neal in the office.

Spoke to Arthur Deal & told him of above

Mr Barton
BR

6716 S

TO: Mr. A. E. Ritchie

SECRET

June 7, 1954

FROM: Defence Liaison (1) Division

<i>50219-5-70</i>	
<i>54</i>	<i>54</i>

SUBJECT: Review of Restrictions on Export of Atomic Materials to Iron Curtain Countries

Following our conversation last week I spoke to Mr. Jarvis, of the Atomic Energy Control Board, who said that he thought that somebody from the Board would be able to go to Washington to take part in the discussions. He called me again on June 4 to say that he had received unofficially from a U.S. official a list of commodities that are to be discussed and an intimation that it was hoped to have the discussions in Washington about the middle of June.

BR

Defence Liaison (1) Division



CABLE ADDRESS "MOTA"

IN YOUR REPLY PLEASE QUOTE

FILE NO. 11-2-1
23-1-4

ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

File 11-2-1

CONFIDENTIAL

REGISTERED

Dec. 16/53

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The Under-Secretary of State
for External Affairs,
Ottawa, Ontario.

50219-5-98
52 150

Attention: Mr. W. H. Barton.

Dear Mr. Barton:

I enclose for your information a
copy of letter dated the 11th instant from Mr. Lyall
Johnson, Chief of the Licensing Control Branch, USAEC
dealing with the modification of their licensing policy
in connection with certain equipment and materials for
Argentina.

17 DEC 1953

Yours sincerely,

G. M. Jarvis.
Secretary.

Encls.
GMJ/h.

CONFIDENTIAL

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11-2-1
23-1-4

CONFIDENTIAL
REGISTERED

16 December 1959.



Mr. Lyall Johnson,
Chief, Licensing Controls Branch,
United States Atomic Energy Commission,
Washington 25, D.C.

Dear Mr. Johnson:

I am much obliged for your letter of the 11th instant advising of the modification of your licensing policy with respect to proposed exports to Argentina involving reasonable quantities of equipment and materials destined for the uses mentioned in your letter. We shall be glad to have this in mind in dealing with future applications here.

Yours sincerely,

G. M. Jarvis,
Secretary.

cc: External Affairs.

GMS/h.

CONFIDENTIAL

COPY/h.

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON 25, D.C.

CONFIDENTIAL
SECURITY INFORMATION

In reply refer to:

CSLC:LJ

December 11, 1953

FILE COPY

Mr. G. M. Jarvis
Secretary
Atomic Energy Control Board
Ottawa, Canada

Dear Mr. Jarvis:

You will be interested in knowing that the U. S. Atomic Energy Commission has recently approved a policy permitting favorable AEC licensing consideration with respect to proposed exports to Argentina involving reasonable quantities of equipment and materials destined for use in biology and medicine, basic research and classroom instruction, exploration for and assaying of raw source material, and similar non-sensitive end-uses.

As a result of this policy change we are currently issuing several licenses for radiation detection and measurement equipment destined to the Argentine AEC for raw material exploration and assay purposes.

In view of our several conversations in the past on this general matter I wanted to be sure to inform you of this modification of licensing policy.

Sincerely yours,

"Lyall Johnson"

Lyall Johnson
Chief, Licensing Controls Branch

CONFIDENTIAL
SECURITY INFORMATION

European/B.A.Wallis/en

DEPARTMENT OF EXTERNAL AFFAIRS

MEMORANDUM

File

TO: Defence Liaison (1) Division

Security **Confidential**

Date **August 13, 1953**

FROM: **European Division**

File No.		
50219-S-40		
59	✓	

REFERENCE:

SUBJECT: **Atomic Energy Control Board letter of July 21 regarding
...export. of radiation detection equipment. to Yugoslavia.....**

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From the political point of view, we do not wish to antagonize the Yugoslavs unnecessarily, but we consider that, in the case of the export of Halross Scintillometers, the security and strategic considerations should be paramount.

Wall

AUG 13 1953

File WRAB

50219-840
8/11

August 12, 1953

CONFIDENTIAL

MEMORANDUM FOR DEFENCE LIAISON DIVISION (1)

Subject: Export of Radiation Detection Equipment
to Yugoslavia

D-1
GSR
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AUG 12 1953

I refer to your confidential memorandum of July 28 in which you asked for our comments on the copy (enclosed with your memorandum) of a letter from the Atomic Energy Control Board concerning this subject.

Our understanding is that the responsibility for determining whether the Halross Scintillometers are strategic equipment rests with the Board. In the circumstances, it is not clear to this Division why our comments were invited, inasmuch as the decision on whether the Department of Trade and Commerce should permit the Scintillometers to be exported to Yugoslavia is one which should be made on straight forward strategic grounds not related to the political implications of the matter. However, I understand that the European Division does not hold any strong political views on the desirability of the proposed export and therefore I will confine my remarks to the suggestion that the scientific adviser to the Board who wrote the letter of July 21 should be reminded of this Department's concern over the importance of ensuring that in all cases of doubt about the strategic significance of a piece of equipment, the views of the United States and perhaps also the United Kingdom authorities should be obtained before a decision is taken.

A. E. Ritchie

A. E. Ritchie
Economic Division

~~CONFIDENTIAL~~
~~CONFIDENTIAL~~
to pass
+ file
w.
summary by Mr. Ritchie

August 12, 1953

CONFIDENTIAL

MEMORANDUM FOR DEFENCE LIAISON DIVISION (1)

50219-9-40
59 | ✓

Subject: Export of Radiation Detection Equipment
to Yugoslavia

93

I refer to your confidential memorandum of July 28 in which you asked for our comments on the copy (enclosed with your memorandum) of a letter from the Atomic Energy Control Board concerning this subject.

Our understanding is that the responsibility for determining whether the Halross Scintillometers are strategic equipment rests with the Board. In the circumstances, it is not clear to this Division why our comments were invited, inasmuch as the decision on whether the Department of Trade and Commerce should permit the Scintillometers to be exported to Yugoslavia is one which should be made on straight forward strategic grounds not related to the political implications of the matter. However, I understand that the European Division does not hold any strong political views on the desirability of the proposed export and therefore I will confine my remarks to the suggestion that the scientific adviser to the Board who wrote the letter of July 21 should be reminded of this Department's concern over the importance of ensuring that in all cases of doubt about the strategic significance of a piece of equipment, the views of the United States and perhaps also the United Kingdom authorities should be obtained before a decision is taken.

(Signed) A. E. RITCHIE.

A. E. Ritchie
Economic Division

DH(2)
Exportation
To note
file
W. L. L. L.



SEEN
D.B.W.

CABLE ADDRESS "M O T A"
IN YOUR REPLY PLEASE QUOTE
FILE NO. 23-100-1H1

ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

CONFIDENTIAL
REGISTERED.

12 August 1953.

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13 AUG 1953

The Under-Secretary of State
for External Affairs,
Ottawa, Ontario.

50219-15-150
52-150

Export of Radiation Detection Equipment
to Yugoslavia.

I am obliged for your letter of the 11th instant regarding the export to Yugoslavia of three Halross Scintillometers. I find on communicating with the Chief of the Export Control Branch of the USAEC that the U. S. is not permitting the export of instruments of this type. I have also been informed that if the present application were approved, approval would be sought for the export of additional instruments. It is felt that for security reasons export of these instruments to Yugoslavia should not be permitted, and the application therefore has been refused.

G. M. Jarvis
G. M. Jarvis.
Secretary.

10

CONFIDENTIAL

EXTERNAL AFFAIRS

1953 AUG 13 AM 9:26

Defence Liaison (1)/W.H.Barton/mjr

CONFIDENTIAL

Ottawa, August 11, 1953.

Your ref: No. 23-100-1H1

50 219-S-40
59 50

The Secretary,
Atomic Energy Control Board,
Ottawa.

Export of Radiation Detection Equipment to
Yugoslavia

I refer to your letter of July 21, 1953, concerning the application of the Halross Instruments Corporation for permission to export to Yugoslavia three Halross Scintillometers. In the opinion of this Department, there are no political considerations which would affect the decision as to whether or not the permit should be issued, although it is believed that there are security objections to doing so. I understand that you are consulting the United States authorities on this aspect of the matter.

BENJAMIN ROGERS

FOR THE

Acting Under-Secretary of State
for External Affairs.

DEPARTMENT OF EXTERNAL AFFAIRS

MEMORANDUM

TO: ...Defence Liaison (1) Division.....

Security...CONFIDENTIAL.....

Date...July 31, 1953.....

FROM: ..Defence Liaison (2) Division.....

File No. [Handwritten]		

REFERENCE: Letter of July 21, 1953, from the..

....Atomic Energy Control Board.....

SUBJECT: Export of Radiation Detection Equipment to Yugoslavia.....

Since the Halross Scintillometer is equipped with a photo-multiplier tube of United States manufacture which the United States authorities have in the past been anxious to prevent from falling into "unfriendly hands", I suggest that the export permit for this equipment should be withheld until the United States authorities concerned have been consulted regarding their present feelings on this matter. Should it now be felt that these precautions could be relaxed, I see no reason why the export permit should not be granted.

2. I assume that the appropriate United States authorities will be notified of our decision in the normal course of events.

Ronald W. Munro

Defence Liaison (2) Division

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AUG 4 1953

DEPARTMENT OF EXTERNAL AFFAIRS

ROUTING SLIP

DATE 28 July 53
SECURITY *Confidential*

TO: European Div.

Dr. Walsh

FROM: DL(1)

w + Barton For Signature For Action For Comments For Approval

For Information and

File Destroy Return *or retention*

COMMENTS: (This space is not for comments of a permanent character which should be formally recorded in a memorandum)

May we have your comments on the question raised in the attached letter, copy of letter from the AECB? Copies have also been sent to Economic Div + DL(2)

wfb.

000040

COPY

Please quote
File No. 23-100-1H1

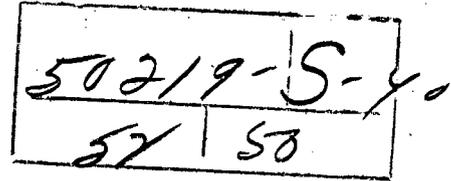
Atomic Energy Control Board,
Ottawa, Canada.

CONFIDENTIAL

REGISTERED MAIL

21 July, 1953.

The Under-Secretary of State
for External Affairs,
East Block,
Ottawa, Ontario.



Attention: G.F. Bruce, Esq.

Dear Sir: Re: Export of Radiation Detection equipment to Yugoslavia.

Because of the export control over atomic energy equipment instituted at the request of the Board, the Department of Trade and Commerce has referred to the Board an application from the Halross Instruments Corporation Limited at Winnipeg Manitoba, for permission to export to Uprava Za Rudarska Intrazinvanja i Ruarska Studje, Belgrade, 6 Nemanjina Ulica, Yugoslavia, three Halross Scintillometers. In view of the rather anomalous position of the consignee country, however, the Board would appreciate your comments regarding the advisability of permitting such export.

- 2 -

For your information I might say that the Halross Scintillometer is a special radiation detector of Canadian design (costing \$820./unit) but using a No.5819 photo-multiplier tube of American manufacture. In the past the distribution of this tube has been under very strict American control and American authorities have expressed anxiety lest samples of it fall into unfriendly hands.

This is the first request the Board has had for permission to export important radiation detection equipment to Yugoslavia. From reports from U.S. and U.K. authorities, however, it appears that those countries have permitted the export of small detection equipment and non-strategic components but have refused permission for the export of larger and more accurate equipment or of special components such as photo-multiplier tubes.

Yours very truly,

(sgd) D.J. Dewar

D.J. Dewar
Scientific Adviser.



CABLE ADDRESS "MOTA"

IN YOUR REPLY PLEASE QUOTE

FILE NO. 23-100-1H1

ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

CONFIDENTIAL
REGISTERED MAIL.

21 July 1953

*File
WMS*

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The Under-Secretary of State
for External Affairs,
East Block,
Ottawa, Ont.

Attention: G. F. Bruce, Esq.

22 JUL 1953

Dear Sir: Re: Export of Radiation Detection equipment to
Yugoslavia.

Because of the export control over atomic energy
equipment instituted at the request of the Board, the Department of
Trade and Commerce has referred to the Board an application from
the Halross Instruments Corporation Limited at Winnipeg, Manitoba,
for permission to export to Uprava Za Rudarska Intrazinvanja i
Rudarska Studje, Belgrade, 6 Nemanjina Ulica, Yugoslavia, three
Halross Scintillometers. In view of the rather anomalous position
of the consignee country, however, the Board would appreciate your
comments regarding the advisability of permitting such export.

For your information I might say that the Halross
Scintillometer is a special radiation detector of Canadian design
(costing \$820./unit) but using a No.5819 photo-multiplier tube of
American manufacture. In the past the distribution of this tube
has been under very strict American control and American authorities
have expressed anxiety lest samples of it fall into unfriendly hands.

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This is the first request the Board has had for permission

CONFIDENTIAL

000043

EXTERNAL AFFAIRS
RECEIVED

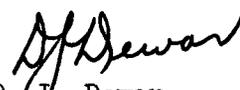
1553 JUL 22 AM 9:54

- 2 -

CONFIDENTIAL

to export important radiation detection equipment to Yugoslavia.
From reports from U.S. and U.K. authorities, however, it appears
that those countries have permitted the export of small detection
equipment and non-strategic components but have refused permission
for the export of larger and more accurate equipment or of special
components such as photo-multiplier tubes.

Yours very truly,



D. J. Dewar.
Scientific Adviser.

DJD/h.

CONFIDENTIAL

000045



CABLE ADDRESS "M O T A"

IN YOUR REPLY PLEASE QUOTE

23-100-1H1

FILE NO.....

ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

file
WMS
4 November 1952
50219-S-40
57 | 50

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The Under-Secretary of State
for External Affairs,
O t t a w a.

Attention: M. H. Wershof, Esq.

Re: Halross Instruments Corporation Limited

Dear Mr. Wershof:

6 NOV 1952

I beg to acknowledge with thanks receipt of your letter of the 1st instant, advising that your Department sees no objection to the supplying of a Scintillometer to the Halross correspondent in Tokyo, Japan, or the releasing of information on the technical details of the instrument, and also returning correspondence sent you with my letter of the 23rd ultimo.

Yours sincerely,

G. M. Jarvis,
Secretary.

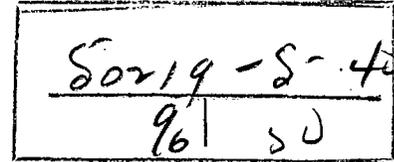
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EXTERNAL AFFAIRS
RECORDS - CI FARED

1952 NOV 6 AM 9:25

Defence Liaison 1/WHBarton/prc

FILE COPY



Ottawa, November 1, 1952.

Dear Mr. Jarvis,

Halross Instruments Corporation Limited

I wish to reply to your letter of October 23, 1952, and to inform you that this Department can see no objection to permitting the supplying of a Scintillometer to the firm in Tokyo, Japan, as described in your letter and to the releasing of information on the technical details of the instrument.

I am returning to you the originals of the correspondence which was attached to your letter.

Yours sincerely,
M. H. WELLS

Under-Secretary of State
for External Affairs

G.M. Jarvis, Esquire,
Secretary,
Atomic Energy Control Board,
O t t a w a .

000048

Far Eastern Division/C.E.McGaughey/M.D.

File B

October 31st, 1952.

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MEMORANDUM FOR DEFENCE LIAISON (1)

50219-5-40
96 ✓

Export of Radiation Detection Instruments
to Japan

3 NOV 1952

This Division concurs with the proposal set forth in your memorandum of October 27th to inform the Secretary of the Atomic Energy Control Board that this Department has no objection to the supplying of a Scintillometer, or the furnishing of information concerning it, to Japan.

C. Running
Far Eastern Division.

OCTOBER 30, 1952.

File

50219-5-90
52 52

MEMORANDUM FOR DEFENCE LIAISON (1)

I have examined your attached memorandum on the Export of Radiation Detection Instruments. I am not able to make out from the correspondence and from your memorandum whether the Japanese controls mentioned relate to security or to the proper handling and distribution of the instruments, nor am I clear as to whether the transmission of instruments from the United States was through official or unofficial channels. The present suggestion appears to be that the instruments might be transmitted to what appears to be a commercial company, which might be a different arrangement to that mentioned in the parallel American experience.

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31 OCT 1952

Carly

Defence Liaison (2) Division.

*He spoke.
OK
Carly*

Defence Liaison 1/WHBarton:prc

File WHB

October 27, 1952.

50219-S-40

Defence Liaison (1)

MEMORANDUM FOR:

ECONOMIC DIVISION

we concur
As R.
Oct 28

Export of Radiation Detection
Instruments to Japan

Attached is a letter dated October 23, 1952, from the Secretary of the Atomic Energy Control Board requesting the views of this Department as to the desirability of permitting the Halross Instruments Corporation to export a Scintillometer to Japan, and to supply technical information about the instrument to the Japanese.

The Secretary of the Atomic Energy Control Board has informed this Department that he has been advised by the head of the Export Controls Branch of the United States Atomic Energy Commission that in the opinion of the United States the measures adopted for control of this type of instrument by the Japanese Government are satisfactory and in fact are the same as those followed during the time that Japan was administered by the U.S. Control Commission. The United States has in recent months supplied a number of instruments of this type to the Japanese.

If you concur, it is proposed to inform the Secretary of the Atomic Energy Control Board that this Department has no objection to the supplying of the instrument or the furnishing of the information to Japan.

M. W. ...

Defence Liaison Division (1)

Similar memorandum sent to:
Far Eastern Division;
Defence Liaison Division (2)

C O P Y

HALROSS INSTRUMENTS
Corporation Ltd.

CANADIAN AVIATION ELECTRONICS Ltd

October 20/52

Mr. G.M. Jarvis, Secretary,
Atomic Energy Control Board,
Ottawa, Ont.

*file
WMB*

Dear Mr. Jarvis:

We are in receipt of a letter from Tokyo, Japan, copy attached, requesting certain technical details concerning our Halross Model 939 Scintillometer.

Within a few weeks we expect to receive from the printers our Technical Service Manual containing full technical information on our Models 939 and 939A Scintillometers. In view of the existing policy governing the export of the Halross Scintillometer, we are wondering if the regulations controlling the issuance of "restricted" technical information would be violated if we were to answer their questions by supplying the Tokyo firm a copy of our Technical Service Manual.

For your information, the company in Tokyo has never purchased a Halross Scintillometer from us, and are raising the questions pending placement of an order.

It is quite possible that similar queries may be received from various locations on occasion, and we would appreciate receiving your comments, or a ruling, on this matter for our future guidance.

Yours very truly,
(sgd)
J.M. Isbister,
General Manager.

C O P Y

TOZAI KOEKI KAISHA, LTD.

File
WRB

Importers and Exporters

Date Sept. 27, 1952.

Halross Instruments Corporation Limited
387 Sutherland Avenue
Winnipeg, Man.
Canada.

Ref.No. Our letter No.
1004

Re: Our Inquiry No. F-8001

Gentlemen:

We wish to apologize for the delay in answering your letter of June 2nd regarding the above mentioned inquiry.

We transferred the informations and catalogs you kindly furnished to the clients, and recently they instructed us to inquire you on the following before their replacing an order with us.

We would, therefore, ask you to forward your answers for the following as early as possible.

A. Characteristics of instrument:

1. Measuring unit - R-unit?
2. Measuring ranges - maximum and minimum.
3. Quantitative sensitivity to alpha and gamma radiation.
4. Is it possible to measure alpha or gamma radiation by changing crystals? Is changing crystals easy?
5. Brief description of measuring and amplifier parts of instruments. If available, net work diagram.
6. Stability of instrument.

B. Parts of instrument:

1. Parts which necessitate changing.
2. Electron tube complement. If special tubes are used, we wish to prepare some spare tubes.
3. Is it necessary to prepare spare crystals?
 . Crystals, if any, specially fitted for measuring alpha and gamma radiation.
4. Voltage, type and life of batteries used.
5. Each price of parts.

Thank you for your kind cooperation,

Very truly yours,
TOZAI KOEKI KAISHA, LTD
(sgd) B. Tanabe, Manager, Machinery Dept 000053

Defence Liaison 1/WHBarton/prc

October 27, 1952.

50219-S/40
52/52

MEMORANDUM FOR: FAR EASTERN DIVISION

Export of Radiation Detection
Instruments to Japan

Attached is a letter dated October 23, 1952, from the Secretary of the Atomic Energy Control Board requesting the views of this Department as to the desirability of permitting the Halross Instruments Corporation to export a Scintillometer to Japan, and to supply technical information about the instrument to the Japanese.

The Secretary of the Atomic Energy Control Board has informed this Department that he has been advised by the head of the Export Controls Branch of the United States Atomic Energy Commission that in the opinion of the United States the measures adopted for control of this type of instrument by the Japanese Government are satisfactory and in fact are the same as those followed during the time that Japan was administered by the U.S. Control Commission. The United States has in recent months supplied a number of instruments of this type to the Japanese.

If you concur, it is proposed to inform the Secretary of the Atomic Energy Control Board that this Department has no objection to the supplying of the instrument or the furnishing of the information to Japan.

M A W
Defence Liaison Division (1)

Similar Memorandum sent to:
Economic Division;
Defence Liaison Division (2)

C O P Y

HALROSS INSTRUMENTS
Corporation Lmt.

CANADIAN AVIATION ELECTRONICS Ltd

October 20/52

Mr. G.M. Jarvis, Secretary,
Atomic Energy Control Board,
Ottawa, Ont.

Dear Mr. Jarvis:

We are in receipt of a letter from Tokyo, Japan, copy attached, requesting certain technical details concerning our Halross Model 939 Scintillometer.

Within a few weeks we expect to receive from the printers our Technical Service Manual containing full technical information on our Models 939 and 939A Scintillometers. In view of the existing policy governing the export of the Halross Scintillometer, we are wondering if the regulations controlling the issuance of "restricted" technical information would be violated if we were to answer their questions by supplying the Tokyo firm a copy of our Technical Service Manual.

For your information, the company in Tokyo has never purchased a Halross Scintillometer from us, and are raising the questions pending placement of an order.

It is quite possible that similar queries may be received from various locations on occasion, and we would appreciate receiving your comments, or a ruling, on this matter for our future guidance.

Yours very truly,
(sgd)
J.M. Isbister,
General Manager.

C O P Y

TOZAI KOEKI KAISHA, LTD.

Importers and Exporters

Date Sept. 27, 1952.

Halross Instruments Corporation Limited
387 Sutherland Avenue
Winnipeg, Man.
Canada.

Ref.No. Our letter No.
1004

Re: Our Inquiry No. F-8001

Gentlemen:

We wish to apologize for the delay in answering your letter of June 2nd regarding the above mentioned inquiry.

We transferred the informations and catalogs you kindly furnished to the clients, and recently they instructed us to inquire you on the following before their replacing an order with us.

We would, therefore, ask you to forward your answers for the following as early as possible.

A. Characteristics of instrument:

1. Measuring unit - R-unit?
2. Measuring ranges - maximum and minimum.
3. Quantitative sensitivity to alpha and gamma radiation.
4. Is it possible to measure alpha or gamma radiation by changing crystals? Is changing crystals easy?
5. Brief description of measuring and amplifier parts of instruments. If available, net work diagram.
6. Stability of instrument.

B. Parts of instrument:

1. Parts which necessitate changing.
2. Electron tube complement. If special tubes are used, we wish to prepare some spare tubes.
3. Is it necessary to prepare spare crystals?
4. Crystals, if any, specially fitted for measuring alpha and gamma radiation.
4. Voltage, type and life of batteries used.
5. Each price of parts.

Thank you for your kind cooperation,

Very truly yours,
TOZAI KOEKI KAISHA, LTD
(sgd) B. Tanabe, Manager, Machinery Dept 000056

Defence Liaison 1/WHBarton/prc

October 27, 1952.

50219-S-40
5852

MEMORANDUM FOR: DEFENCE LIAISON DIVISION (2)

Export of Radiation Detection
Instruments to Japan

Attached is a letter dated October 23, 1952, from the Secretary of the Atomic Energy Control Board requesting the views of this Department as to the desirability of permitting the Halross Instruments Corporation to export a Scintillometer to Japan, and to supply technical information about the instrument to the Japanese.

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The Secretary of the Atomic Energy Control Board has informed this Department that he has been advised by the head of the Export Controls Branch of the United States Atomic Energy Commission that in the opinion of the United States the measures adopted for control of this type of instrument by the Japanese Government are satisfactory and in fact are the same as those followed during the time that Japan was administered by the U.S. Control Commission. The United States has in recent months supplied a number of instruments of this type to the Japanese.

29 OCT 1952

If you concur, it is proposed to inform the Secretary of the Atomic Energy Control Board that this Department has no objection to the supplying of the instrument or the furnishing of the information to Japan.

M. A. W. [Signature]
Defence Liaison Division (1)

Similar memorandum sent to:
Economic Division;
Far Eastern Division.

C O P Y

HALROSS INSTRUMENTS
Corporation Lmt.

CANADIAN AVIATION ELECTRONICS Ltd

October 20/52

Mr. G.M. Jarvis, Secretary,
Atomic Energy Control Board,
Ottawa, Ont.

Dear Mr. Jarvis:

We are in receipt of a letter from Tokyo, Japan, copy attached, requesting certain technical details concerning our Halross Model 939 Scintillometer.

Within a few weeks we expect to receive from the printers our Technical Service Manual containing full technical information on our Models 939 and 939A Scintillometers. In view of the existing policy governing the export of the Halross Scintillometer, we are wondering if the regulations controlling the issuance of "restricted" technical information would be violated if we were to answer their questions by supplying the Tokyo firm a copy of our Technical Service Manual.

For your information, the company in Tokyo has never purchased a Halross Scintillometer from us, and are raising the questions pending placement of an order.

It is quite possible that similar queries may be received from various locations on occasion, and we would appreciate receiving your comments, or a ruling, on this matter for our future guidance.

Yours very truly,
(sgd)
J.M. Isbister,
General Manager.

C O P Y

TOZAI KOEKI KAISHA, LTD.

Importers and Exporters

Date Sept. 27, 1952.

Halross Instruments Corporation Limited
387 Sutherland Avenue
Winnipeg, Man.
Canada.

Ref.No. Our letter No.
1004

Re: Our Inquiry No. F-6001

Gentlemen:

We wish to apologize for the delay in answering your letter of June 2nd regarding the above mentioned inquiry.

We transferred the informations and catalogs you kindly furnished to the clients, and recently they instructed us to inquire you on the following before their placing an order with us.

We would, therefore, ask you to forward your answers for the following as early as possible.

A. Characteristics of instrument:

1. Measuring unit - R-unit?
2. Measuring ranges - maximum and minimum.
3. Quantitative sensitivity to alpha and gamma radiation.
4. Is it possible to measure alpha or gamma radiation by changing crystals? Is changing crystals easy?
5. Brief description of measuring and amplifier parts of instruments. If available, net work diagram.
6. Stability of instrument.

B. Parts of instrument:

1. Parts which necessitate changing.
2. Electron tube complement. If special tubes are used, we wish to prepare some spare tubes.
3. Is it necessary to prepare spare crystals?
4. Crystals, if any, specially fitted for measuring alpha and gamma radiation.
4. Voltage, type and life of batteries used.
5. Each price of parts.

Thank you for your kind cooperation,

Very truly yours,
TOZAI KOEKI KAISHA, LTD
(sgd) B. Tanabe, Manager, Machinery Dept 000059

Defence Liaison 1/KHBarton/prc

October 27, 1952.

FILE COPY

MEMORANDUM FOR: ECONOMIC DIVISION

50219-S-4
52 52

Export of Radiation Detection
Instruments to Japan

Attached is a letter dated October 23, 1952, from the Secretary of the Atomic Energy Control Board requesting the views of this Department as to the desirability of permitting the Halross Instruments Corporation to export a Scintillation Counter to Japan, and to supply technical information about the instrument to the Japanese.

The Secretary of the Atomic Energy Control Board has informed this Department that he has been advised by the head of the Export Controls Branch of the United States Atomic Energy Commission that in the opinion of the United States the measures adopted for control of this type of instrument by the Japanese Government are satisfactory and in fact are the same as those followed during the time that Japan was administered by the U.S. Control Commission. The United States has in recent months supplied a number of instruments of this type to the Japanese.

If you concur, it is proposed to inform the Secretary of the Atomic Energy Control Board that this Department has no objection to the supplying of the instrument or the furnishing of the information to Japan.

M. H. WERSHOF

Defence Liaison Division (1)

Similar Memorandum sent to:
D.L. (2)
Far Eastern



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

CABLE ADDRESS "MOTA"

IN YOUR REPLY PLEASE QUOTE

23-100-1H1

FILE NO.

File
WMB

23 October 1952

50219-15-40
521 50

The Under-Secretary of State
for External Affairs,
O t t a w a.

Attention: Mr. W. H. Barton

Re: Halross Instruments
Corporation Limited

Dear Mr. Barton:

Following our telephone conversation of yesterday, I enclose herewith original letter dated the 20th instant from Halross Instruments Corporation Limited, and its enclosure of letter from Tokyo, Japan, regarding the supply of the Scintillometer to Japan, and as a preliminary, the supply of technical details of the instrument.

Before approving the export of an instrument, we would, in any event, ask to be supplied with the name and address of the end user, particulars of the end use and the place where the instrument was to be used. I am not informed as to whether there is any machinery available whereby the Japanese Government might assume some responsibility for seeing that any instrument supplied would not be re-exported.

I should be glad to have the views of your Department as to the desirability of permitting the supply of the instrument or the furnishing of the information to Japan.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ/g
Encl.

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24 OCT 1952

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EXTERNAL AFFAIRS
RECORDS-CLEARED

1952 OCT 24 PM 3:38

File Copy

50219-S-40	
19	/

ATOMIC ENERGY CONTROL BOARD

Copy sent to Italian Embassy 2/11/51

INFORMATION FOR THE PRESS
OTTAWA

Filed HWK

FOR IMMEDIATE RELEASE
21 November, 1951.

Copy on 50219-Q-40

INTERNATIONAL DISTRIBUTION OF RADIOACTIVE ISOTOPES

The procedure for the international distribution of radioactive isotopes from the Chalk River atomic energy plant for research and industrial purposes has been revised, the Right Honourable C.D. Howe announced today. The revision has been made in the light of the past two years' experience in the international distribution of isotopes and also in view of the arrangements made for distribution to be handled by Eldorado Mining and Refining (1944) Limited as agent of the Atomic Energy Project, National Research Council.

Under the revised procedure it will not be necessary for the Government of the applicant's country to appoint a representative in Canada to handle details of shipment and payment - these details in future will be arranged directly between the applicant and the distributor. It will still be necessary for a department or agency designated by the Government of an applicant's country to certify the application as to the desirability of the proposed use of radioactive isotopes and as to the qualification of the user, but the applicant will no longer be required to undertake that his establishment will be open to inspection by scientists regardless of nationality. A memorandum setting out the new export procedure is attached.

A catalogue listing the isotopes available, now numbering some 98, is being issued by Eldorado.

Further particulars, copies of the catalogue and details as to specific requirements, may be obtained from Eldorado Mining and Refining (1944) Limited, P.O. Box 379, Ottawa, Ontario, or from the Isotopes Branch, Atomic Energy Project, National Research Council, Chalk River, Ontario.

Attachment.

PROCEDURE FOR THE EXPORT OF RADIOACTIVE ISOTOPES

The distribution of pile-produced radioactive isotopes out of Canada will be handled by Eldorado Mining and Refining (1944) Ltd., acting as agent of the Atomic Energy Project, National Research Council, Chalk River. Subject to any special directions which may be given by the Canadian Atomic Energy Control Board, the procedure and conditions in connection with such distribution will be as follows:

1. The Government of each country desiring to obtain isotopes from Canada should address a note to the Secretary of State for External Affairs -

(a) recognizing that neither the Canadian Government nor any agency of the Canadian Government shall be responsible for injury or damage arising out of the handling or application of the isotopes supplied.

(b) designating the foreign Government departments or agencies authorized to certify applications as to the desirability of the proposed use and the qualifications of the user.

2. Each request for isotopes should be made on application forms available from the Isotope Branch, Atomic Energy Project, National Research Council, Chalk River, Ontario, or from Eldorado Mining and Refining (1944) Limited, P.O. Box 379, Ottawa, Ontario, and should give information on the following matters:

- (a) The name of the institution at which the materials will be used.
- (b) The name and title of the individual who will supervise the use of the material.
- (c) The type and quantity of isotope desired.
- (d) The total activity in millicuries, activity per gram or cubic centimetre, the form in which the isotope is desired.
- (e) The desired time and rate of deliveries.
- (f) The purpose for which the material will be used.
- (g) The name and address of the distributor to whom a copy of the "Authorization for Radioisotope Procurement" may be sent. If this is not indicated both copies of the form will be sent to the customer.

3. The request must be accompanied by a statement from a Foreign Government Department or agency designated under (b) certifying that

- (a) the proposed use of the material requested is approved by that department or agency;
- (b) the applicant is qualified to make effective use of the material requested.

4. Each application for isotopes should be forwarded to Eldorado Mining and Refining (1944) Ltd., P.O. Box 379, Ottawa, Ontario. It will be reviewed and dealt with as nearly as may be on the same principles as a Canadian application. If it is decided that the material requested should be supplied, Eldorado Mining and Refining (1944) Ltd., will communicate with the applicant and advise as to completion of arrangements.

RADIOELEMENTS



ELDORADO

MINING AND REFINING (1944) LIMITED

SALES AND DEVELOPMENT DIVISIONS

OTTAWA, CANADA

OFFICES: 91 MONTREAL ROAD
MAILING ADDRESS: P.O. BOX 379
CABLE ADDRESS: ELDORADIUM

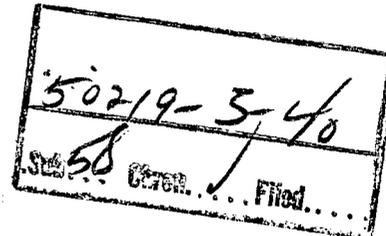
Your Ref.:

Our Ref.: 24-S-1
E.1021

*File
copy*

November 6th., 1951.

Mr. G. deT. Glazebrook,
The Under-Secretary of State
for External Affairs,
Ottawa.



Dear Mr. Glazebrook:

We are indebted to you for the trouble you took in connection with obtaining the report forwarded to us with your letter of November 3rd.

Yours sincerely,

Manager.

R. F. Errington/em

D

ACCESSORY EQUIPMENT



*This refers to correspondence on
SFINDEX, 12 point in English and*

Defence Liaison Division (2)/G.deT.
Glazebrook/ML

N10294

CONFIDENTIAL

Ottawa, November 3, 1951.

The Director,
Joint Intelligence Bureau,
Department of National Defence,
OTTAWA, Ontario.

50219-5-40
58 50

With reference to my conversation with
Mr. McGibbon, I am enclosing copies of the following
communications concerning SFINDEX:

Letter No. D-315 of September 28, 1951
to the Canadian Legation in Berne, and

Letter No. 506 of October 22 from the
Canadian Legation in Berne.

The information in the incoming letter has
been passed to the Eldorado Mining and Refining
Company.

G. de T. GLAZEBROOK

Defence Liaison Division (2)

Defence Liaison (27) G. de T. Glazebrook/ML

50219-5-40
58 11. 11. 50

CONFIDENTIAL

Ottawa, November 3, 1951.

Dear Mr. Errington:

With reference to our conversation yesterday, I am enclosing two copies of Letter No. 506 of October 22 from the Canadian Minister in Berne, concerning the status of SFINDEX.

I have made further enquiries and there appears to be no additional information in Ottawa on this subject.

Yours sincerely,

G. de T. GLAZEBROOK
(G. de T. Glazebrook)

R.F. Errington, Esq.,
Eldorado Mining and Refining Limited,
91 Montreal Road,
Eastview, Ontario.

Ext. 182A

50219-S-40
49 | SU

OTTAWA FILE
No.....

Letter No.... 506

Date.... October 22, 1951

SECURITY CLASSIFICATION
CONFIDENTIAL

FROM: The Canadian Minister, Canadian Legation, Berne.

TO: THE UNDER-SECRETARY OF STATE FOR EXTERNAL AFFAIRS, CANADA

Reference... Letter No. D.315 dated September 28, 1951

Subject: Request by the Eldorado Mining and Refining Company re
their agents in Switzerland.

D-2
1
2
3
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5
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7
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29 OCT 1951

Copies Referred To.....

No. of Enclosures
None

Post File

No.....

The Commercial Counsellor of this Legation has made informal enquiries concerning SFINDEX and has expressed the opinion, on the basis of these enquiries, that there is not sufficient evidence to justify the cancellation of any existing agency contracts between SFINDEX and Canadian concerns. He has recommended, however, that exports from Canada effected through the intermediary of SFINDEX should not be authorized except after strict control as regards country of final destination and end-use.

2. In a status report on the company received by the Commercial Counsellor, it is stated that SFINDEX have been listed as a joint stock company in the Swiss Trade Register since June 9, 1941, with offices in Sarnen (Obwald) and a branch in Zurich (Fraumünsterstrasse 9). The board originally consisted of Mr. Gregori Messen-Jaschin (of Latvia), president, and Dr. Hans Ming, of Lungern (barrister). They were joined in 1948 by Dr. E. Bircher, of Aarau, and Mr. R. Furrer, formerly Director of Customs in Berne. The capital was raised from Swiss francs 50,000 to 200,000 in 1945, to 500,000 in January 1947, and to 1,000,000 in February 1948. This company is in the export-import business. The office in Zurich was opened in 1927 under the name Lukstin & Co., but SFINDEX's operations are carried on independently. It appears that during the war SFINDEX secured orders from German companies on behalf of Swiss firms. SFINDEX are favourably reported on in Swiss trade circles.

3. The American authorities in Berne, in 1948, suspected SFINDEX in connection with a transaction involving a shipment of arms to Israel. Since that time there has been only very inconclusive evidence of dealings by SFINDEX with Eastern Europe. SFINDEX are included in the American "Watch List" referring to firms suspected of dealing with countries behind the Iron Curtain.

4. The British authorities in Berne state that in 1949 SFINDEX were suspected in connection with an export of industrial diamonds to the U.S.S.R., and, in 1950, in connection with the shipment of ball bearings to Poland. Recently, SFINDEX came under suspicion again with respect to radar equipment said to be required by Poland.

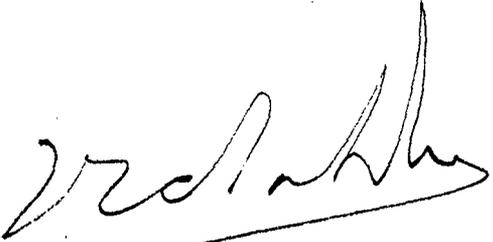
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EXTERNAL AFFAIRS
RECORDS DELETED
1951 OCT 29 PM 4:04

- 2 -

5. The Commercial Counsellor has been unable to obtain any information from Swiss authorities on this subject, but it should be noted that they generally do not like to discuss the activities of a private company.



Minister.

File kept in safe

EXTERNAL AFFAIRS	
File No.	201-A C(10)
Sub. Chron.	58 Chron. 4 Filed.....

15-2-E1
11-24-1

Your Ref: 2-64-1
B-1172

20 March 1950

Eldorado Mining and Refining (1944) Ltd.,
No. 3 Temporary Building,
O T T A W A .

File
h

Attention: Mr. W.J. Green.

Dear Sirs:

This refers to your letter of the 17th instant and my subsequent conversation with Mr. W.J. Green regarding the enquiry received through your European agent about the purchase of up to 100 kg. of oxide or concentrate for the Swiss Atomic Energy Commission, Basel, Switzerland. I understand that you are advising your agent that you would not be prepared to accept such an order.

Yours faithfully,

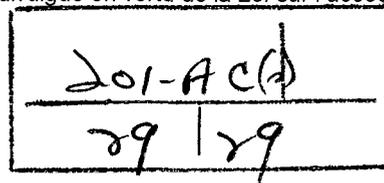


G. M. Jarvis,
Secretary.

GMJ:r

cc: Mr. J. George.

C O P Y



ELDORADO MINING AND REFINING (1944) LIMITED
No. 3 Temporary Building, Ottawa, Canada.

File No. 2-64-1
B-1172

March 17th 1950

Atomic Energy Control Board,
Room 1018, #7 Building,
Sussex Street, Ottawa, Ontario.

Attention Mr. G.M. Jarvis.

Gentlemen:

Dr. P. Huber, - Vice President of the Swiss Atomic Energy Commission, Basel, Switzerland, has recently enquired through our European agent for the probable purchase of up to 100 kg. maximum, of uranium metal. On the advice of a recent telephone conversation with your office, we wrote our agent advising that at present the uranium was simply unobtainable (in the form of metal). In that communication we made no mention of the attitude taken by your office.

Our agent now advises that Dr. Huber would have instead, concentrate ore in the same quantities as mentioned above. Would your office please indicate your attitude to Eldorado providing Dr. Huber with either or both of the following:

- (a) Commercial uranium black oxide (U_3O_8)
(Minimum U_3O_8 content 97%)
- (b) Finely ground pitchblende with a known U_3O_8 content of from 15-30%.

May the above be given your early and kind attention please.

Yours very truly,

"W.J. Green"

SALES DIVISION

WJG/gmr

000074



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

PLEASE REFER
TO FILE 23-100-1X1

~~Personnel Division~~
to see & return
to def Ricard SR
to file
R

Miss [unclear]

3 January 1950.

James George, Esq.,
Department of External Affairs,
Ottawa, Ontario.

EXTERNAL AFFAIRS RECEIVED
File No. 201-AC1(A)
Sub. St. Chron. J. Filed...

Dear Mr. George:

The Board has given approval to an application
for Export Permit from X-Ray and Radium Industries Ltd., of
261 Davenport Road, Toronto 5, Ontario of two (2) Keleket
Pocket Dosimeters and one (1) Charging Unit to Dr. A. L. Kelekis,
Salonika, Greece.

Yours sincerely,

G. M. Jarvis.
Secretary.

HOUSE OF COMMONS

Thursday, December 8, 1949

The house met at eleven o'clock.

PRIVILEGE

REFERENCE TO EDITORIAL IN TORONTO "SATURDAY NIGHT" OF DECEMBER 6

Mr. Jean François Pouliot (Temiscouata): For a long time, Mr. Speaker, I have not risen to a question of privilege. I will do so now. My attention has been drawn to an article which appeared in the stalest of all weeklies, edited by the most self-complacent of all idiots, I refer to Toronto *Saturday Night*. The article is probably from the pen of a bureaucrat-minded, bigoted, besotted nonentity, the Canadian pocket edition of Harry Hopkins. It is on the word "blokes", which I have used in the past and which I will use again. I want to give my own definition of the word and what I mean by it when I utter it. It is quite different from the dictionary meaning. Whenever I use that word in the future everybody will understand what I mean.

Here is the article:

The word "blokes," which is not very familiar to English-speaking Canadians, has come into popularity with certain French Canadians as an uncomplimentary designation for Englishmen—probably in much the same way as "Boches" came to be applied to the Germans.

That is false. The article continues, speaking of the member for Temiscouata:

He is entitled to that view, but we do not think he is entitled to express it in the House of Commons in language of carefully calculated insult.

This is untrue. I do not call a "bloke" a man who is necessarily born anywhere outside of Canada. The word "bloke" applies to everyone, born anywhere, who is stupid enough to consider Canada as a lemon to squeeze.

ATOMIC ENERGY

First and final report of special committee on the operations of the atomic energy control board.—Mr. McIlraith.

BRITISH NORTH AMERICA ACT

AMENDMENTS TO THE CONSTITUTION—CONSULTATION WITH PROVINCIAL GOVERNMENTS
—TABLING OF FURTHER CORRESPONDENCE

Right Hon. L. S. St. Laurent (Prime Minister): I should like to lay on the table copies in English and French of the letter

addressed yesterday to the premiers of the provinces with respect to the proposed conference on the procedure for amendments to the British North America Act. As was done on previous occasions, I imagine that hon. members would wish to have this letter printed as an appendix to *Hansard*.

Hon. members will note that in addition to this conference for the purpose of advising on a method of making in Canada amendments to the constitution, the government of Canada is proposing to the premiers of the provinces that there be another dominion-provincial conference after the next session, and that the preparatory work on such a conference be undertaken as soon as possible.

Mr. Speaker: Is it the pleasure of the house that the letter appear as an appendix to *Hansard*?

Some hon. members: Agreed.

(For text of further correspondence, see Appendix.)

EXTERNAL AFFAIRS

MEETING OF COMMONWEALTH MINISTERS
AT COLOMBO, CEYLON

Hon. L. B. Pearson (Secretary of State for External Affairs): Mr. Speaker, during the debate on external affairs on November 17, I said that Canada would be represented by a minister at the important forthcoming meeting of commonwealth ministers of external affairs to take place in Colombo, Ceylon, beginning January 9. I am now in a position to state that the government has decided that the Secretary of State for External Affairs should head the Canadian delegation to this conference.

The Minister of Fisheries, who will be representing Canada at the meeting of the governing body of the International Labour Organization at Mysore, India, at the beginning of January, will also, I hope, be available to attend the Colombo conference if the labour conference finishes in time.

The advisers to the Canadian delegation to the Colombo conference will consist of the deputy under-secretary, Mr. Reid; the head of the Far Eastern division of the department, Mr. Menzies; and Mr. LePan, of the economic division of the department.

It has been arranged that the newly appointed Canadian high commissioner to Pakistan, Mr. Johnson, will travel with the

delegation to Colombo en route to his post, and will also act as an adviser. A senior official of the Department of Trade and Commerce will accompany the delegation, because we hope to take advantage of our presence in Karachi, New Delhi and Colombo to explore the possibilities of increased trade between Canada and Pakistan, India and Ceylon.

QUESTIONS

(Questions answered orally are indicated by an asterisk.)

***REPORTS ON PERSONS RESIDENT IN CANADA**

Mr. Coldwell:

Are any reports on persons resident in Canada given confidentially, or otherwise, by the R.C.M.P. to private citizens, companies or corporations?

Mr. Garson: Mr. Speaker, this question is rather wide in its scope. I conferred with the hon. member who asked it, and he has agreed to substitute for the question on the order paper the following:

Does the Royal Canadian Mounted Police make a practice of providing reports upon the request of employers as to the character of persons seeking employment with such employers?

The answer is no.

NATIONAL FILM BOARD—EMPLOYEES

Mr. Diefenbaker:

1. What is the total number of employees of the national film board who have ceased to be employed by, or under, the national film board, since the first of January, 1949?

2. Of these, how many have been transferred to, or secured employment in, other departments or agencies of government?

Mr. Winters: In answering a similar question orally yesterday, and from memory, when my estimates were under consideration, I said, as to employees who left the board this year, that the number was 61. Actually the number is 67.

The answer to the question of the hon. member for Lake Centre follows:

1. Sixty-six appointed under authority of the National Film Act; one appointed under authority of the Civil Service Act.

2. Eight have been employed by other departments or agencies of government.

Mr. Fraser: The minister has corrected a statement he made in committee of supply yesterday having to do with the subject matter of this question on the order paper. He says the number should be 67, instead of 61 as he stated yesterday. Does that also change the number that have been transferred to other departments, which is given as eight?

Mr. Winters: No.

[Mr. Pearson.]

(Handwritten: Fil)

POTATOES—IMPORTS AND EXPORTS

Mr. Hatfield:

1. How many bushels of (a) Irish potatoes; (b) certified seed potatoes, were exported to the United States each year from 1940 to date?

2. How many bushels of (a) table potatoes; (b) seed potatoes, were imported from the United States during each of the years from 1940 to date?

Mr. McIlraith:

1. Exports to United States:

Calendar year	Table	Certified
	potatoes	seed potatoes
	Bu.	Bu.
1940	621,790	911,851
1941	229,336	676,500
1942	7,798	878,473
1943	63,646	1,056,622
1944	3,460,971	1,995,560
1945	3,433,319	2,163,477
1946	166,319	2,057,984
1947	2,859,284	2,216,497
1948	1,967,797	4,331,707
Jan. 1 to Oct. 31,		
1949	1,073,964	4,713,163

2. Imports from United States:

Calendar year	Table	Certified
	potatoes	seed potatoes
	Bu.	Bu.
1940	994,338	2,357
1941	552,648	1,110
1942	671,408	335
1943	1,053,012	2,607
1944	348,220	5,700
1945	3,312,675	11,633
1946	5,409,588	34,492
1947	642,167	3,567
1948	338,053	1,592
Jan. 1 to Oct. 31,		
1949	519,505	3,260

BRIDGE BETWEEN ALLUMETTE ISLAND, QUE., AND NORTH RENFREW, ONT.

Mr. Proudfoot:

Have any representations been made to the government by the government of the province of Ontario or by the government of the province of Quebec, asking for an interprovincial bridge between Allumette Island, Quebec, and North Renfrew, Ontario?

Mr. Fournier (Hull): No.

URANIUM

REPORTED SHIPMENTS FROM CANADA TO SOVIET RUSSIA

Right Hon. C. D. Howe (Minister of Trade and Commerce): Mr. Speaker, on the orders of the day on Tuesday, December 6, the hon. member for Vancouver-Quadra (Mr. Green) asked for a statement as to reports on the dispatch of uranium from Canada to Soviet Russia. I can now answer that question.

DECEMBER 8, 1949

2903

search of the files of the Department of Munitions and Supply and the files of Eldorado Gold Mines Limited, the predecessor company of Eldorado Mining and Refining (1944) Limited, reveals the following facts:

On May 6, 1943, Eldorado Gold Mines Limited received an inquiry from their New York selling agent, Canadian Radium and Uranium Corporation, reporting an order from Chematar Incorporated, a firm of reputable New York exporters, for 500 pounds of black uranium oxide and 500 pounds of uranium nitrate. The inquiry reported that the destination of the material would be Soviet Russia, where it would be used for purposes connected with the prosecution of the war against nazi Germany; that the black uranium oxide would be used for ferro-uranium compounds, which in turn would be used in the production of armaments; and that the uranium nitrate would be used for medical purposes.

Eldorado Gold Mines Limited, which was then a privately-owned company, applied to the arms export permit branch of the Department of Trade and Commerce for a permit for the export of this material to the United States. This was granted by the zinc control branch of the metals controller on May 11, 1943, after it had been determined in the meantime that an export licence from the United States bureau of economic warfare had been issued.

The invoice of the material indicates that 500 pounds of black uranium oxide was billed at \$1,275 and 500 pounds of uranium nitrate at \$1,180, making a total billing of this material of \$2,455.

The material was shipped on May 22, 1943, to Colonel A. N. Kotikov, resident representative of the Soviet government purchasing commission, air service depot of the air transport command, Gore Field, Great Falls, Montana, U.S.A. Payment for the shipment was deposited to the account of Eldorado Gold Mines at the Royal Bank of Canada, New York. The documents covering this shipment appear to be all in order.

Since its mining operations commenced, Eldorado had been producing uranium as a by-product of radium, which was the product of commercial interest at that time. Uranium was being sold for a number of uses through ordinary commercial channels. It was natural, therefore, that the order to which I have referred was treated as normal in both Canada and the United States of America.

At this time, 1943, only a very few persons—very few indeed—knew that experiments in the use of atomic energy for weapons purposes were proceeding. Those who did know, however, realized the wisdom of not calling

attention, by refusing to fill commercial orders, to uranium as a material suitable for any use other than the commercial uses to which it had been put for many years—uses such as those stated for the shipment in question.

It will also be remembered that in 1943 we were at the very height of the war against nazi Germany. Naturally it was then the policy of all the western allies to render any help possible to the Soviet union in the gigantic war struggle which that country was waging, with its allies, against the nazis.

I should add that, as atomic energy research developed, uranium became valuable, of course, for weapons purposes. In 1944, therefore, the Canadian government expropriated Eldorado Gold Mines Limited, in order to acquire closer control of this new strategic mineral.

After the acquisition of the property, Mr. Grant Glassco, of the firm of Clarkson, Gordon, Dilworth and Nash, was appointed by the government as a commissioner to examine into the affairs of Eldorado Gold Mines and the successor crown company, and was instructed particularly to look for irregularities in the shipment of radium and uranium.

Mr. Glassco's investigation revealed nothing to suggest that, in disposing of radioactive substances acquired by them, Eldorado and its agents dealt with customers other than the United States government and the ordinary buyers and users of these substances in Canada and the United States. A close check of the files shows no evidence of any shipment from Canada being re-exported other than the shipment I have just mentioned.

Mr. Green: After I had asked the question the other day the hon. member for Lake Centre (Mr. Diefenbaker) asked a supplementary question in which he said:

Two years ago the Minister of Trade and Commerce undertook to table the investigator's report in the Eldorado investigation. I would suggest that that be brought to the minister's attention, with a view to having it tabled because of its particular interest at the moment, having regard to the evidence that is being given in Washington.

Would the minister be willing to table the report?

Mr. Howe: I have had *Hansard* examined to see what I did say. I find that on March 24, 1947, on the order for the production of papers as reported at page 1657, the hon. members for Lake Centre moved that a copy of the evidence taken in connection with the investigation of Eldorado Gold Mines Limited and an alleged conspiracy by French, Pochon and Pregel to defraud the said company,

and the report by the commissioner in connection therewith, be tabled. I said that the report was not yet in the hands of the government, but in any event from inquiries I had made "it could not be tabled, for the reason that it contains information which is of a secret character affecting other governments as well as the government of Canada". That is the position today.

Mr. Green: That is the position still taken by the government?

Mr. Howe: Yes.

ELECTRIC POWER

DEVELOPMENT ON NIAGARA AND ST. LAWRENCE RIVERS

On the orders of the day:

Mr. T. L. Church (Broadview): Mr. Speaker, I have a question which I might have raised as a question of privilege. I am addressing it to the Secretary of State for External Affairs. In view of the statement made in this morning's issue of the *Globe and Mail* and in other newspapers I would ask him these questions:

First, has the government any further information on the development of power in the Niagara river? Officials say that nothing has happened there since 1920 or 1922.

Second, what hopes are there for the ratification of any treaty separately? The treaty with respect to additional power at Niagara was before the house in 1922 and 1923. Has the attention of chief officials of the government been called to a statement by chief officials of the Hydro Electric Commission of Ontario, who have been asking ratification of this for twenty months? A spokesman for the Hydro Electric Commission of Ontario has said that the report made in the house yesterday is erroneous; one of them went so far as to say—and used a word which I do not think should have been used—that it was "silly".

Is there any change in the international section of the St. Lawrence river regarding the use of power, either separately or in conjunction with the seaway plan? Will any further information be forthcoming before the session ends on these important matters?—because, as I said yesterday, no doubt blackouts are due in Ontario and in other places owing to the scarcity of power. Nothing has been done in the matter whatsoever. The Secretary of State for External Affairs should make a statement about it.

Hon. L. B. Pearson (Secretary of State for External Affairs): Mr. Speaker, at the present time there is nothing I can usefully add to what I said in this matter yesterday.

[Mr. Howe.]

However I shall look into the questions raised by the hon. member and see whether a supplementary answer might be made tomorrow, or during the consideration of my estimates.

Mr. Church: It is just all talk; that is all it is.

INQUIRY FOR RETURN

IMMIGRATION—JAPANESE NATIONALS

On the orders of the day:

Mr. Howard C. Green (Vancouver-Quadra): Mr. Speaker, I should like to ask a question of the Minister of Mines and Resources. Some weeks ago I placed on the order paper a question having to do with the immigration branch, and concerning permits being given to persons of the Japanese race to return to Canada. On November 21 that question was made an order for return. On December 3 the Secretary of State (Mr. Bradley) said that the responsible official was away, but that the return would be brought down as soon as possible. The minister's estimates are to be called today. I wonder if it would be possible to have that return before the estimates are under consideration?

Hon. Colin Gibson (Minister of Mines and Resources): Mr. Speaker, I have made inquiries and understand that this return is about ready. It has taken some time to secure the information, because the Japanese admitted to Canada are screened over in Japan before they come here. There was some difficulty in getting answers as to the categories in which the Japanese should be placed. I shall try to bring down the return later in the day, if it is available.

TRADE

INQUIRY AS TO CALLING OF COMMONWEALTH CONFERENCE

On the orders of the day:

Hon. W. Earl Rowe (Dufferin-Simcoe): Mr. Speaker, in view of the rapidly diminishing market overseas, referred to especially the other day by the Minister of Agriculture (Mr. Gardiner) in Brantford, would the government give consideration, at least before the calling of another session, to encouraging the taking of initial steps toward calling a British commonwealth trade conference?

Mr. Church: Mr. Speaker—

Mr. Fraser: Wait for an answer.

Right Hon. C. D. Howe (Minister of Trade and Commerce): The statement which preceded the question is one in which I cannot concur. I do not know of any rapidly diminishing market overseas. If there is any lack of trade, I suggest that at least we are having plenty of conferences.

EXTERNAL AFFAIRS RECEIVED 97.

MESSAGE FORM

OUTGOING

FILE REF	No. 201-ACA
Sub.	Chron. Filed

SECURITY CLASSIFICATION
CONFIDENTIAL

FROM: THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS, CANADA

TO: The Canadian Ambassador,
Washington, D.C.

MESSAGE TO BE SENT	EA No. 2932	Date December 8, 1949.	FOR COMMUNICATIONS OFFICE USE ONLY
EN CLAIR			SENT -- DEC 8 1949
CODE			
CYPHER AUTO	<input checked="" type="checkbox"/>		

DEGREE OF PRIORITY

ORIGINATOR

SIG.

TYPED: J. George/bw

DIV. Def. Liaison

LOCAL TEL. 3795

G. M. Jarvis, Secretary of the Atomic Energy Control Board, will arrive Washington p. m. December 13 for conference with U.K. and U.S. officials on atomic export control policy. The conference will probably last two days. Accommodation has been arranged.

APPROVED BY

SIG. *[Signature]*

TYPED:

IS THIS MESSAGE LIKELY TO BE PUBLISHED

YES NO

INTERNAL DISTRIBUTION:

R. Mackay

DONE

DATE: 12-8-49

SECRETARY OF STATE FOR EXTERNAL AFFAIRS.

COPIES REFERRED TO:

N.A. Robertson

Dr. MacKenzie

G. M. Jarvis

DONE D.F. Carter

DATE: Dec. 8/49

CONFIDENTIAL

Ottawa, June 10, 1949.

Dear Mr. Mackenzie:

I wrote to Mr. Howe on May 11, closing a list of articles of atomic energy equipment and materials which the Advisory Panel on Atomic Energy thought should be included in the consolidation of your Department's list of the Export Permit Regulations. The list has subsequently been discussed and the form of it revised by officials of the Atomic Energy Control Board, the Department of External Affairs and your Department, so that the items in our original list could be covered under the minimum number of headings.

I am enclosing a copy of the revised list which, as you will see, is in two parts, the first drafted for inclusion in the published schedules of the Export Permit Regulations, and the second listing items already covered by more general headings in the published schedules. I understand that your Department notifies collectors of customs as to the items which require an export permit, and that you can deal with the second part of our list in this way.

I realize that some of the items which we are asking you to place under control are not

H.W. Mackenzie, Esq.,
Deputy Minister,
Department of Trade and Commerce,
OTTAWA.

....2

EXT. AFFAIRS RECORDS
File No. 201-ACB
Sub. <i>21</i> Chron. <i>21</i> Filed.....

- 2 -

obviously connected with atomic energy but we have finally decided to include them after a full technical discussion with the responsible authorities in the United States and the United Kingdom. We attach a good deal of importance to maintaining a common front in these matters with the United States and the United Kingdom and I am grateful to you, and to the officials of your Department, for your co-operation in establishing export controls in one form or another over all of these items.

Yours sincerely,

N. A. Robertson,
Chairman,
Advisory Panel
on Atomic Energy.



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

PLEASE REFER
TO FILE 13-C1 E.D.3

CONFIDENTIAL
REGISTERED

7 June 1949

J. George, Esq.,
Department of External Affairs,
O T T A W A

EXTERNAL AFFAIRS RECORDS
File No. 201-AC(4)
Sub. 3/ Chron. 3/ Filed.....

Dear Mr. George:

This refers to the meeting in Mr. F.H. Bull's office on the 4th instant about export control through the machinery of the Export and Import Permits Act, of certain equipment and materials relating to atomic energy.

I attach two lists, List I showing items to be included in the published schedule of goods requiring an export permit, and List II showing items covered by more general items in the published schedules, but which are to be notified by memorandum to collectors as items to be referred to headquarters for clearance.

My understanding was that Mr. Bull indicated that he would be prepared to make the necessary arrangements to have export permit applications covering any items in which the Board is interested, as shown by these lists, referred to the Board for clearance, with the necessary information as to consignees and end uses to enable the Board to deal with them.

I understand further that, since the schedules are currently being amended in other respects, a draft of the new schedules designed to cover the items in the lists attached will be circulated before it is put forward for approval by Order in Council.

If the foregoing accords with your understanding I should be obliged if the necessary steps could be taken toward having the proposed changes brought into effect at an appropriate date.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ:r
Att.

7 June 1949

CONFIDENTIAL

LIST I

REVISED LIST OF ITEMS FOR INCLUSION IN SCHEDULE
OF GOODS REQUIRING AN EXPORT PERMIT

GROUP 5 - IRON AND STEEL, INCLUDING ALLOY STEEL

Add under item 6, "Manufactured products" -

Centrifuges with peripheral speed exceeding 1000'/sec.
Lathes, glass working.
Pumps:

- (a) stainless steel;
- (b) vacuum, mechanical (dry) with capacity greater than 20 cfm. capable of producing a vacuum of 1 mm. of mercury pressure;
- (c) vacuum diffusion (mercury and oil types).

Under item 6, make sub-item beginning "Precision instruments" read, "Precision instruments being gauges; balancing machines; measuring machines; testing machines; atomic energy equipment, radiation detection equipment and components".

Add under item 9.

Induction furnaces for melting metals under vacuum.

GROUP 6 - NON-FERROUS METALS AND PRODUCTS

Add under item 4, "Manufactured Products" -

- (d) Precision instruments, being gauges; balancing machines; measuring machines; testing machines; atomic energy equipment, radiation detection equipment and components.

Delete item 5 and substitute the following therefor:

5. Radioactive Substances.

- (a) Elements such as uranium, thorium, plutonium, neptunium, actinium, radium, polonium, radon and all alloys, salts and compounds containing same.
- (b) Radioactive isotopes, including radioactive lead, radioactive phosphorus (also known as Phosphorus³²) radioactive carbon, radioactive cobalt, radioactive iodine and all salts and compounds containing same.
- (c) Ores and concentrates of uranium and thorium including pitchblende, uraninite, carnotite, monazite.
- (d) Products; Manufactured articles containing uranium or thorium, including incandescent mantles, paints containing radium in any form; radium luminous and radium fluorescent compounds.

Add new item.

Beryllium.

Beryllium in form of ores (such as beryl), oxides, metal, alloys or salts.

Add new item.

Rare Earth Metals.

Rare earth metals and their compounds, including lanthanum and cerium, (except in lighter flints and abrasives).

Add new item.

Zirconium

Zirconium oxide in all its forms.

Add new item.

Gallium

Gallium metal, salts and compounds.

Add new item.

Electrolytic cells for production of fluorine

GROUP 8 - CHEMICAL AND ALLIED PRODUCTS

Add the following items.

Deuterium (Heavy Hydrogen) and all compounds containing same, including heavy water.

Fluorine, and all compounds containing same except hydrofluoric acid and fluorspar.

Diffusion pump oils (including silicon diffusion pump fluids).

LIST II

Items (covered by more general items in schedules) to be notified to officers concerned as items to be referred to Atomic Energy Control Board for clearance.

Vacuum gauges (ionization type)

Atomic Energy Equipment and components:

- (a) Isotope separating units, including mass spectrographs and mass spectrometers for any purpose (including leak detection).
- (b) Components for same including ion sources; ionization chambers, micromicroammeters; electrometer type electronic tubes with input grid currents of less than 1 micromicroampere; acceleration and focussing tubes, resistors of resistance greater than 1000 megohms.
- (c) Cyclotrons.
- (d) Betatrons.
- (e) Synchrotrons.
- (f) Electrostatic generators.

(g) Linear accelerators.

Radiation detection equipment and components:

- (a) Geiger-Mueller detectors,
- (b) Proportional counter detectors,
- (c) Ionization chambers,
- (d) Scintillation counters,
- (e) Neutron counters,
- (f) Electrosopes and electrometers, pocket and survey types, including dosimeters,
- (g) Scaling units and ratemeters of all types suitable for use in radiation detection,
- (h) Instruments capable of measuring currents of less than 1 micromicroampere,
- (i) Components for instruments enumerated under (a) to (h) above,
- (j) High-gain, high impedance linear pulse amplifiers,
- (k) Electrometer type electronic tubes with input grid currents of less than 1 micromicroampere,
- (l) Resistors of resistance greater than 1000 megohms.

High precision Laboratory Instruments:

Potentiometers,
Resistance Bridges,
Spectrophotometers,
Microphotometers,
Spectrographs,
Oscillographs,
Galvanometers.

Valves, bellows type, except as integral parts of equipment

EXTERNAL SERVICES REWARDS		
File No.	201. A.C.S.	
Sub. 3/1	Chron. 3/1	Filed....

Defence Liaison/J. George/KD

CONFIDENTIAL

June 7, 1949

MEMORANDUM FOR MR. ROBERTSONExport Controls

Last Friday you asked me to discuss with Trade and Commerce our atomic energy export control problem. On Saturday Mr. Jarvis and Dr. Dewar of the Board, and Mr. Cleveland of our Economic Division went with me to see Mr. W.F. Bull, Director of the Commodities Branch. I think we have found ways and means of putting all the items on the United States list under effective control in Canada, but we have lumped together under as few headings as possible many of the United States items. This overcomes the objection which Trade and Commerce had to adding a large number of items to their control list. Mr. Jarvis and Mr. Bull are going to draw up an agreed list under the minimum headings, and when it is ready I shall prepare a letter for your signature forwarding it officially from the Panel to Trade and Commerce.

J. George

c.c.: Mr. Cleveland
Mr. Crean

TOP SECRET

C O P Y

*Referred to
Dr. Nathan?
Dr. Salant?
N. Jarvis*

CANADIAN EMBASSY,
Washington, D.C.,
May 24, 1949

EXTERNAL AFFAIRS RECORDS		
201-AC(1)		
File No.		
Sub 39	Chroc. 39	Filed...

Dear Mr. Robertson:

With reference to Mr. A.L. Wright's letter to you of May 20th, I am enclosing four copies of a letter and memorandum addressed to him which arrived after his departure to Ottawa. Apparently when he was discussing various atomic matters with Mr. Arneson at the State Department he enquired about the control exercised by Sweden and Norway over the export to iron curtain countries of materials used in the development of atomic energy. The enclosures are Mr. Arneson's answer to this question. You will note that they are to be regarded as particularly secret.

You will have noticed the freest attacks which are being made here on the U.S. Atomic Energy Commission arising from the discovery that, in at least one case, a Communist was awarded a scholarship financed from the appropriation of the Commission. The disappearance by loss or theft of a small quantity of enriched material from one of the Commission's establishments has given additional cause for attack and is leading to a demand for the removal of Mr. Lilienthal as Chairman. Since the focus of criticism is the Joint Congressional Committee, these developments lead me to think that the tripartite talks will be still further delayed as they obviously will make it more difficult for the Commission to hold the advance discussion which they have in mind.

Yours sincerely,

(Signed) H.H. Wrong

N.A. Robertson, Esq.,
Secretary to the Cabinet,
Ottawa, Canada.

(C O P Y)

TOP SECRET.

This document consists of 1 pages
Copy No. 1 of 6 series A

DEPARTMENT OF STATE
Washington

May 20, 1949.

Dear Mr. Wright:

The other day you inquired as to the progress made by the Swedish and Norwegian Governments in instituting controls over the export to Soviet-controlled countries of materials useful for atomic energy purposes. You also expressed interest in the status of similar action being taken by other governments with whom our diplomatic representatives have been in consultation.

I attach a brief summary based on our current understanding of the situation as it pertains to the following countries: Germany, Japan, Korea, Sweden, Norway, Switzerland, Liechtenstein, the Netherlands, Belgium, Italy and France. There is of course no necessity for reviewing the actions taken by your Government and the British Government in this connection.

In view of possible repercussions which might occur in certain countries should the extent of the United States activities in connection with the establishment of such controls become known, I am sure that the contents of this paper will be kept in the strictest confidence of your Government.

Sincerely yours,

/s/

R. Gordon Arneson

Attachment:

Summary entitled "Status of Establishment of Export Controls over Atomic Energy Materials in Certain Countries."

Mr. A.L. Wright,
Canadian Embassy,
Washington.

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Status of Establishment of Export Controls Over Atomic Energy
Materials in Certain CountriesGermany.

Bi-zonal authorities accepted the principle of the control scheme after discussions with a representative of the United States Atomic Energy Commission last May and some informal controls have been exercised. We are now informed that a tripartite law will be promulgated soon to ban the production and export from Western Germany of all items on the AEC List A (those subject to the formal licensing regulations of the Atomic Energy Commission in this country). Existing laws already cover two items from List B, beryllium and heavy water. Instructions are being formulated regarding controls over the remaining List D. items.

Japan.

The control lists were transmitted by the Department of the Army to the American authorities in Japan in May 1948. The authorities have given assurance that through the use of these lists for screening exports, the controls have been made fully effective without difficulty.

Korea.

The American authorities in Korea are screening all exports to avoid shipment to Soviet areas of the items on the control lists. The problem is not difficult, since the only applicable items of the list are monazite and beryl ores.

Sweden.

The Swedish Government has given assurance that the few items on List A now being manufactured in Sweden are being produced solely to meet requirements of the Swedish atomic energy program and none are being exported. The same holds true for items being imported to Sweden from the United States.

It is expected that List B will be made available to the Swedish authorities soon with the request that export over these items also be screened to prevent their shipment to undesirable destinations. There is every reason to believe that the Swedish Government will cooperate fully in this connection.

TOP SECRET

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-2-

Norway.

For some time Norwegian laws have required the licensing of practically all exports and imports. Only a few items on Lists A and B are produced in Norway and it is understood that the Norwegian Government will cooperate to the fullest extent to prevent shipment of these materials to undesirable destinations.

Switzerland.

Swiss officials are aware of the AEC Lists A and B and it is understood that progress is being made to institute internal governmental procedures to prevent shipment of significant items to Soviet countries. Because of the traditional neutrality of Switzerland, all discussions have necessarily been handled in the most discreet fashion.

Liechtenstein.

A check on the end uses of any exports from the United States to consignees in Liechtenstein will be investigated by our consular representatives stationed in Switzerland. There would appear to be no need for other action at present.

The Netherlands.

The Netherlands Government has given advice that all items on AEC Lists A and B have been placed on a list of prohibited exports. It is understood that the controls will be administered without promulgation of formal regulations.

Belgium.

The Belgian Government has agreed to the principle of control of these materials and positive steps are being taken to prevent exports to Soviet countries of items on the lists through informal contact with the few Belgian manufacturers of such materials. Since Belgian customs regulations present difficulties in placing specific items under formal control regulations, it is not likely that official regulations will be issued -- for that matter, all available evidence indicates that the informal method will be entirely satisfactory.

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-3-

Italy.

The Italian Government has had under consideration the AEC List A for some time and will shortly receive List B. Delays in instituting controls are quite understandable in view of our knowledge that there is little of significance in the atomic energy field being produced in Italy at this time. We are, however, pressing our representatives to secure tangible assurances that some sort of control mechanism will be instituted by the Italian Government.

France.

It is our understanding that responsible quarters of the French Government have expressed their assurances that no export of atomic energy materials from France to Soviet countries will be permitted. We further understand that steps are being taken albeit cautiously to establish a competent screening procedure within the responsible departments of the government.

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EXTERNAL AFFAIRS RECORDS		
File No.	201-AC(1)	
Sub.	Chron.	Filed.....
29	58	

TOP SECRET AND PERSONAL201-AC (1)
~~201-K(1)~~

Ottawa, May 11, 1949.

Dear Mr. Howe:

On May 10 the Advisory Panel on Atomic Energy met and considered, among other things, the problem of export controls. I am enclosing a copy of the Minutes from which you will see that it was agreed that the Panel should recommend to you that you submit to Council a list of articles, which have been suggested by the United States Atomic Energy Commission, to be included in the next consolidation of the Export Permit Regulations published by your Department.

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I am also enclosing two copies of the list of articles which we are suggesting should be included in the consolidation. I do not think there is any great urgency to this matter, and as I understand that your Department is preparing a consolidation within the next two months, I would suggest that the attached list be included in the submission which I suppose you will be making to cover the revised consolidation as a whole.

Yours sincerely,

N.A. Robertson,
Chairman,
Advisory Panel on Atomic Energy.

The Rt.Hon. C.D. Howe, P.C., M.P.,
Minister of Trade and Commerce,
OTTAWA.

EXTERNAL AFFAIRS RECORDS

S E C R E T

File No. 201-AC(2)

NOTES ON AGENDA FOR MAY 10TH MEETING OF
ADVISORY PANEL ON ATOMIC ENERGY

Sun 29 Chron. 29 Filed....

Item 1.

Dr. Mackenzie's report on his conversations with Mr. Lillenthal would naturally arise out of the minutes of the last meeting, unless it is decided not to discuss the project which he outlined at the last meeting of the Panel, as the minutes of this meeting were not sent to Mr. Jarvis or Mr. Bateman who will be attending this meeting.

Item 2.

Export Controls. The position is that the United States wish us to place under export control a longer list of equipment and material connected with atomic energy than we consider necessary. The United Kingdom have agreed to place under control nearly all the items on the United States list. The United States Atomic Energy Commission has now intimated informally to our Atomic Energy Control Board that they are worried about the possibility of Canada re-exporting to non-CFC countries articles imported from the United States which would be prohibited for export to other countries under present United States regulations.

The United States suggested list of items to be placed under export control in Canada is in two parts, the first part to be included in the schedules of the Export Permit Regulations of the Department of Trade and Commerce under the authority of the Export and Import Permits Act, and the second part containing items which would be controlled by

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- 2 -

informal liaison between the Atomic Energy Control Board and the producing industries. For administrative reasons and also because the Export and Import Permits Act is now due to expire on March 31, 1950, the Board would prefer to have the Atomic Energy Regulations amended as set forth in Schedule "B" to Mr. Jarvis' letter of March 30.

The argument for a comprehensive list is that a list which includes only vital secret equipment or materials might indicate to Soviet Intelligence the lines along which our atomic energy projects are proceeding.

If the United States list (or at least the major part of it to which the United Kingdom has already agreed) is accepted for Canada, we should have to amend, presumably by Order in Council, the Atomic Energy Regulations of Canada, to give authority to the Atomic Energy Control Board to define as "prescribed equipment" anything that might be used for the production or application of atomic energy. The Board could then control all items on the United States list, or those which it may be decided should be under control.

Mr. Jarvis will bring to the meeting a list of those items on the United States list which the United Kingdom has not yet agreed to place under control



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

EXTERNAL AFFAIRS RECORDS	
File No.	201-AC(2)
Sub	29 Chron. 29. Filed.....

PLEASE REFER TO FILE 11-13-1

6 April 1949

The Under-Secretary of State
for External Affairs,
O T T A W A

This will acknowledge with thanks receipt of your letter of the 30th ultimo addressed to the President of the Board, with which you enclosed translation of an article entitled "Export of Canadian Uranium Ore to U.S.A." which appeared in Red Star on February 15th.

We shall be very glad if you will, as suggested, send us translations of articles appearing in the Soviet press which relate to atomic energy matters and I shall see that they are brought to the President's attention.

G. M. Jarvis,
Secretary.

GMJ:r

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7 APR 1949

EXTERNAL AFFAIRS
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1949 APR 7 AM 10:03



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

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13-C1 F.D.2
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TOP SECRET
BY HAND

4 April 1949

James George, Esq.,
Acting Secretary,
Advisory Panel on Atomic Energy,
East Block,
O T T A W A

EXTERNAL AFFAIRS RECORDS
File No. 201-ACC
Sub. 29 Chron. Filed.....

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48

Dear Mr. George:

I have your letter of the 1st instant relating to the memoranda on patent matters and export controls. Dr. Mackenzie has seen these but his view was that copies need not go to Mr. Howe at this stage.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ:r



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TO FILE 13-C1
23-1

ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

TOP SECRET
BY HAND

Referred: Mr. Robertson
U.S.S.E.A.
Dr. Keenleyside
Dr. Solandt
Mr. Cleveland

30 March 1949

Done - 1-4-49 - MK

Mr. Crean - to see
& file
J. George

James George, Esq.,
Acting Secretary,
Advisory Panel on Atomic Energy,
East Block,
O T T A W A

MINISTRY OF ATOMIC ENERGY RECORDS
File No. 201-AC(2)
Sub. 58 Chron. 39 Filed

Dear Mr. George:

I attach seven copies of a memorandum for the Panel dealing with the United States proposals as to export control of material and equipment, which were considered by the Panel on 8 September last and which I have since been trying, with practically complete lack of success, to moderate.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ:r

Atts.

SECRET

MEMORANDUM FOR ADVISORY PANEL ON ATOMIC ENERGY

Proposed Parallel U.S.-U.K.-Canada Programme
of Export Control on a Selected List of
Materials and Machinery

This refers to the United States' proposals for export control of material and equipment related to atomic energy, which were considered at the meeting of the Panel on the 8th September 1948 and as to which it was agreed that the proposals could be accepted in principle but that an effort should be made through informal discussion with U.S. and U.K. officials in Washington to reduce the number of things to be brought under export control.

Before a meeting could be arranged, the U.K. advised the U.S. of its decision to place under control a list of items which included substantially everything mentioned by the U.S.

Accordingly, when a meeting did take place on 10 December 1948, the U.K. was not prepared to discuss the scope of the controls and the U.S., while expressing its willingness to discuss details, indicated clearly its feeling that the Canadian list should include substantially everything originally suggested by the U.S. Subsequent correspondence has not modified the U.S. view and has rather emphasized one consideration put forward by the U.S. as applicable especially to Canada, namely, that since the control of U.S. exports to Canada is not as complete as that on exports to other countries, the possibility of re-exportation from Canada of articles imported from the U.S. should be covered as effectively as is practicable.

Attached as Schedule 'A' is a list of the items which the U.S. has requested be placed under Canadian export control. Part I of the Schedule includes the items suggested for formal coverage, which, in practice, means under present conditions, by inclusion in the schedules to the Export Permit Regulations of the Department of Trade and Commerce, with a working arrangement between that Department and the Board as to the cases which are to be referred to the Board for approval before export permits are granted. Part II of the Schedule includes the items suggested for control by industry liaison.

The items are described as in the U.S. proposals, to facilitate reference to earlier proceedings, but efforts would be made to evolve shorter descriptions for inclusion in the Export Permit schedules. It is understood that the Export Permit Regulations and schedules are under revision and are to be revoked and replaced, in time, at latest, to be included in the forthcoming Consolidation of Orders and Regulations.

It will be necessary to provide for information as to the proposed consignees and end uses of items under control, and this can be dealt with in the revision of the Export Permit Regulations.

. 2 .

The items marked 'X' are not, or are not clearly, within the definition of "prescribed equipment" contained in the Atomic Energy Regulations of Canada. Authority for placing them under export control may be found in the Export and Import Permits Act as being necessary "in order to implement an governmental arrangement or commitment", but this authority would lapse upon the expiration of the Act (which is now expressed to expire 31 March, 1950), its repeal or an amendment which eliminated the quoted provision. Reliance on the Export and Import Permits Act also would make industry liaison control arrangements unenforceable because there would be no underlying authority for them.

If it were decided that the legal basis of control should be the Regulations rather than the Export and Import Permits Act, it would be necessary to amend Section 101(1)(i) of the Regulations, so as to make the definition of "prescribed equipment" substantially as broad as the power given by Section 9(1)(d) of the Act, and make certain consequential changes. It would also necessitate provision either in the Regulations or by general order under the Regulations for adequate clearance of transactions within Canada in "prescribed equipment" as newly defined. Draft amendments to the Regulations are attached as Schedule 'B' hereto.

G.M.J.

30 March 1949

SCHEDULE "A"

PART I

From "LIST A":

Materials

1. Uranium metal, thorium metal, metals and alloys containing uranium and thorium.
2. Uranium compounds, including the following:
 - a. Uranium (or uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium dioxide (thoria)
4. Monazite sand or other thorium containing ores.
5. Carnotite, pitchblende or other uranium containing ores.

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material).
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., and electromagnetic or gaseous diffusion process.
 - c. Electronuclear machines
 - X (1) Cyclotrons
 - X (2) Betatrons
 - X (3) Synchrotrons
 - X (4) Synchro-cyclotrons
 - X (5) Van de Graaf machine (electrostatic generators)
 - X (6) Linear accelerators
2. Class II Facilities.
 - a. Radiation detection instruments and their components.
 - X (1) Geiger Mueller, proportional or parallel plate counter scalers.
 - X (2) Geiger Mueller or proportional counter rate meters
 - X (3) Scalers, all types adaptable to radiation detection
 - X (4) Geiger Mueller, proportional audio, or mechanical detectors
 - X (5) Integrating ionization chamber meters and ionization chamber rate meters
 - X (6) Geiger Mueller, proportional, or parallel plate counter detector components
 - X (7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere
 - X (8) Counter pulse rate meters
 - X (9) High gain, high impedance linear pulse amplifiers
 - X (10) Geiger Mueller quenching units
 - X (11) Geiger Mueller or proportional coincidence units
 - X (12) Electrosopes and electrometers, pocket and survey types, including dosimeters.
 - X (13) Chambers, pocket type, with electrometer charger-reader
 - X (14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere
 - X (15) Resistors, values above 1,000 megohms.

b. Mass spectrometers and mass spectrographs including components.

- X (1) Ion sources, mass spectrometer or spectrograph types
 - X (2) Acceleration and focusing tubes
 - X (3) Ionization chambers
 - X (4) Micromicroammeters
 - X (5) Electrometer type tubes as above
 - X (6) Resistors, values over 1,000 megohms
- X c. Leak detectors, mass spectrometer type.

From "LIST B":

Materials

- X 1. Beryl, Beryllium metal, beryllium alloys, beryllium oxides and other beryllium compounds, in all forms except fabricated alloys.
- X 2. Elemental fluorine, fluorocarbons and fluorine compounds, except hydrofluoric acid and fluorspar.
- X 3. Zirconium oxide in all forms.
- X 5. Diffusion pump oils (oils enabling the attainment of vacuum of 10-4 millimeters of mercury pressure absolute in a single stage diffusion pump; including silicons diffusion pump fluids).
- X 6. The following metals and their compounds:
Cerium (except in lighter flints and abrasives)
Lanthanum and all other rare earths
- 7. Heavy water.

Equipment

- X 1. Mechanical (dry) vacuum pumps, with capacities of 20 cfm or more and capable of producing a vacuum of 1 mm of mercury pressure.
- X 2. Diffusion vacuum pumps, mercury and oil types.
- X 3. Induction furnaces for melting metals under vacuum
- X 5. Vacuum gauges (ionization type).
- X 6. Valves, bellows type, except as integral parts of equipment.
- X 7. Stainless steel pumps.
- X 8. Centrifuges, stainless steel industrial process type.
- X 9. Glass working lathes.
- X 11. Electrolytic cells for the production of fluorine

From "LIST OF COMMODITIES UNDER EXPORT CONTROL OF OFFICE OF INTERNATIONAL TRADE, DEPARTMENT OF COMMERCE, AUTHORIZED BY AEC.":

Department of Commerce	<u>Schedule B No.</u>	<u>Commodity</u>
X	663900	Thoriated tungsten wire
	664905	Beryllium metal
	664950	Radium metal (radium content)
	664998	Polonium metal
	815590	Radium salts and compounds for medical use.
	815590	Radon (radium emanations)

	<u>Department of Commerce Schedule B No.</u>	<u>Commodity</u>
	813590	Chemicals containing artificial radioactive isotopes.
	839900	Actinium bearing salts and compounds.
X	839900	Beryllium salts and compound, including beryllium carbonate and beryllium oxide
	839900	Chemicals containing artificial radioactive isotopes
	839900	Polonium bearing salts and compounds.
	839800	Radium ore concentrates
	839800	Radium salts and compounds (radium content)
	843800	Paints containing radium
X	664996	Gallium metal
X	839900	Gallium salts and compounds

From "SUGGESTED ITEMS FOR HANDLING BY INDUSTRY LIAISON"

	High precision laboratory instruments
X	Potentiometers
X	Resistance Bridges
X	Spectrophotometers
X	Microphotometers
X	Spectrographs
X	Oscillographs
X	Galvanometers

PART II

From "LIST B":

Materials

- X 4. Graphite, artificial (excluding integral parts of equipment).
- X 6. The following metals and their compounds:
 germanium, indium, rhenium, rhodium.

Equipment

- X 10. Insulators of especially high dielectric strength at elevated temperatures (such as high zirconia and high alumina content).
- X 12. Especially pure refractory materials for exceptionally high temperatures, including fabricated forms. (such as beryllia, zirconia, and alumina.)

From
 Department of Commerce
Schedule B No.

	<u>Schedule B No.</u>	<u>Commodity</u>
X	664910	Bismuth metals and alloys

From "SUGGESTED ITEMS FOR HANDLING BY INDUSTRY LIAISON"

- X Powdered nickel and special nickel fabrications.
- X Unusual metals and chemicals, especially when of exceptionally high purity.
- X Magnetic separators for ores.
- X Electronic devices for controlling and/or recording flow in industrial processes.
- X High voltage Power Tubes.

SCHEDULE "B"

PART I

Section 101, Subsection (1)

Delete paragraph (i) and substitute:

"(1) "prescribed equipment" means any property, real or personal, other than prescribed substances, that in the opinion of the Board may be used for the production, use or application of atomic energy;"

PART II

Add as section 206:

"206. Prescribed equipment.

No order shall be necessary to authorize dealings within Canada by any person as regards prescribed equipment except to such extent and as to such prescribed equipment as may from time to time be specified by order."

PART III

Delete Section 303 and substitute:

"303. Import and Export.

No person shall import into Canada or export from Canada any prescribed equipment for the time being specified by Order for the purposes of this section or any prescribed substance without first proceeding to the Collector of Customs and Excise at the proposed port of entry or exit an import or export permit from the Board, and no Collector of Customs and Excise shall permit any such prescribed equipment or any prescribed substance

(a) to be released for delivery to an importer in Canada; or

(b) to be exported from Canada

unless the appropriate permit from the Board is produced to him."

DEPARTMENT OF EXTERNAL AFFAIRS
OTTAWA

No. 212.

March 21, 19 49

Sir,

I have the honour to transmit to you, herewith, one copy of the paper mentioned in the subjoined schedule.

I have the honour to be,

Sir,

Your obedient servant,

G. G. CREAN

Secretary of State
for External Affairs.

EXTERNAL AFFAIRS RECORDS
File No. 201-AC(2)
Sub. 79 Chron. 58. Filed....

The Canadian Permanent
Delegate to the United Nations,
NEW YORK.

NAME AND DATE	SUBJECT
Despatch No. 218, March 7, 1949, from the Canadian Legation, Warsaw, Poland, transmitting copy of a translation of article in " <u>Dziennik Zachodni</u> ", Poznan, February 24th.	Sale of Canadian Uranium to USA.

EXTERNAL AFFAIRS RECORDS

CANADIAN LEGATION

File No. 201-AC(S)

Warsaw

7 March 1949

Sub. 79 Chron. 79 Filed.....

To the Secretary of State for External Affairs,
Ottawa.

I transmit herewith one copy of the document(s)
listed below.

Done 2-3-49 MR.
Refer: Can. Del., N.Y.
Mr. Robertson
Dr. Mackenzie
Mr. Jarvis
Dr. Polanski
J.D.B.

H.P. Kirkwood
Charge d'Affaires
(XXXXXXXXXXXXXXXXXX)

DOCUMENTS AND DATE

SUBJECT

Translation of article in
"Dziennik Zachodni",
Poznan, February 24th.

Sale of Canadian Uranium to USA

"Atomic Business. Wall Street
robs an ally."

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18 MAR 1949

EXTERNAL AFFAIRS
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Translation from Polish

"Dziennik Zachodni" (Western Journal) - Poznan, 24 February 1949.

"Atomic business". Wall Street robs an ally.

Toronto (Telepress). The export of uranium from Canada to the United States which is carried out since 1940 in accordance with a secret agreement concluded between these two countries represents so far the value of at least 80 billion dollars. This information appeared on the first page of the Canadian progressive daily "Canadian Tribune" in an article entitled "Wall Street robs our atomic wealth."

The above-mentioned paper estimates that Canada has supplied the United States with at least half a million pounds of uranium per annum. The energy that might be derived out of this quantity of uranium, considering that a pound of uranium produces 10 million KWH, represents, according to "Canadian Tribune" the value of 87 billion dollars for the period of 7 years. This sum is tantamount to the profits made by American capitalists within the last seven years.

The secret American trusts which buy Canadian uranium, are paying less than \$3 for a pound. But the value of a pound of uranium, calculated on the basis of the volume of power derived from that quantity of uranium, amounts to \$25,000. The volume of uranium which is annually imported to the United States represents a potential power of 2,500 billion KWH. The yearly production of uranium in Canada amounts approximately to 40 billion K.W.H. Thus, according to "Canadian Tribune" the Yankees remove from Canada every year a volume of uranium which could supply Canada's requirements for power during 60 years.

The Canadian progressive daily says further: "Uranium supplies not only power but many biproducts extremely important for industry. The production and sale of these biproducts will be in future a splendid business the profits from which cannot be simply appraised. But Ottawa will not admit to the nation what happens to our uranium."

This is due to the fact that the most valuable material in the world which might be called the raw material of the atomic era is being bought for a song by foreign capitalists.

"Our uranium - says the paper - is being sold to foreigners at such a low price that this transaction might be safely called a theft. Our workmen, peasants and brain workers are asked to thank on their knees for the Marshall "Aid" and behind our backs the Government is giving to the Yanks an "atomic aid" worth 80 billion dollars."

In fact the Canadian uranium is worth infinitely more than the Yanks' dollars. The American dollar will break down when Wall Street collapses. But Canadian uranium is the safest capital investment. Uranium is the stable currency of the future. In conclusion "Canadian Tribune" says that the programme proposed to the nation by its Liberal-Tory Government is a programme leading to the industrial, financial and military suicide of Canada



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

EXTERNAL AFFAIRS RECORDS
File No. <i>201-AC(a)</i>
<i>78</i> Sub. BOA Chron. <i>58</i> Filed
S E C R E T
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PLEASE REFER TO FILE 13-Cl F.D.3
23-1
10-5

15 February 1949

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James George, Esq.,
Department of External Affairs,
O T T A W A

Dear Mr. George:

Following our recent telephone conversation on the subject of export control of equipment related to atomic energy, I send you herewith two copies of letter dated the 2nd instant from Mr. A.K. Longair of the B.C.S.O. to Mr. Hugh M. Beshers of the U.S.A.E.C.

I have been in correspondence with Mr. Beshers since the unsatisfactory meeting in Washington in December last, about the possible Canadian set-up, but am assuming that you would not wish to have these exchanges on your files until something can be put forward for action.

Yours faithfully,

G. M. Jarvis,
Secretary.

GMJ:r
Encs.

Spoken to R. Jarvis.
Ed. J.

C O P Y

BRITISH COMMONWEALTH SCIENTIFIC OFFICE

1785 Massachusetts Ave.N.W.
Washington 6, D.C.

File No: 187-69-3

February 2, 1949.

CONFIDENTIAL

Mr. Hugh M. Beshers,
Chief, Export Control Branch,
Division of Production,
U.S. Atomic Energy Commission,
Public Health Building,
1901 Constitution Ave., N.W.
Washington, D.C.

Dear Mr. Beshers:

Thank you very much for your letter of 31st January enclosing the details of export licenses granted during the last quarter of 1948 relating to the United Kingdom. I was on the point of writing the following letter to you.

At our meeting on 10th December with Mr. Jarvis, I find that I misrepresented the position in the United Kingdom slightly but not seriously. Although we have powers under three different acts to control varying classes of materials, the powers under two of them are in reserve and all control is still exercised through the Import, Export and Customs Powers (Defence) Act, 1939. The statutory authority in this case is the Board of Trade but so far as atomic energy matters are concerned, they always refer to the Division of Atomic Energy of the Ministry of Supply. I hope to send to you within the next week or so a copy of the latest list of goods controlled under this act, incorporating the amendment which I sent to you on December 3rd, but it comes to this, that the entire list of items controlled by statutory authority is as follows:

Beryllium

Thorium

Uranium

Radio-active substances and mixtures containing such substances (including such substances or mixtures contained in cells, needles, plaques, tubes or other special containers), of the following descriptions:-

Ferro-uranium

Mesothorium compounds

Radium compounds

Thorium and its compounds

Uranium and its compounds

Mixtures containing any of the above

Amplifiers, high gain stable linear pulse, designed to operate within the range 50 c/s to 10 Mc/s, and of input resistances not less than 10 megohms

Betatrions

Centrifuges with a peripheral speed exceeding 1,000 ft./sec.

Cyclotrons and instruments of similar nature

Electroscopes, pocket and laboratory

Equipment for health monitoring against radiation hazards, excluding photographic film and equipment containing it

Furnaces, vacuum, designed to operate at pressures lower than 0.1 mm Hg and at temperatures higher than 1100°C

Geiger-Muller counter tubes

Heavy water, being water containing more than 10 per cent deuterium oxide

Instruments capable of measuring a current of less than 1 micro micro ampere

Ionization chambers

Ionization measuring equipment suitable for the radiation survey of terrain and plant sites

Ion separators, electro-magnetic, including mass spectrographs and mass spectrometers for any purpose (including leak detection)

Linear accelerators to produce particles of energies greater than one million electron volts

Magnets, A.C. and D.C., suitable for betatrions, cyclotrons and instruments of similar nature, and synchrotrons

Neutron-counters containing boron, boron trifluoride, or hydrogen

Positive-ion sources, suitable for use in cyclotrons, mass spectrometers and the like

Pumps, vacuum diffusion, of which the diameter measured inside the barrel at the inlet jet is 12 inches or more

Resistors of resistance not less than 10^{10} ohms, and instruments embodying them

Scaling units and rate meters, suitable for use in radiation detection

Scintillation counters

Synchrotrons

Valves, electrometer, designed to handle input currents less than 1 micro micro ampere and instruments embodying them

Voltage generators to produce D.C. voltage greater than one million volts, and designed to be capable of accelerating charged particles

Radiation measuring equipment and components forming an integral part of X-ray machines designed to operate at voltages under 500 Kv.

It may strike you that the list of radioactive substances g1000114

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is not very complete but you will understand that the Minister of Supply has complete control of all artificially radioactive materials derived from the pile because they can only be produced in a plant operated by him and processed at another place (The Radiochemical Centre) which operates on an agency basis for the Ministry of Supply. It goes without saying that he has control of all fissile material.

We have not included major items, such as piles and diffusion plants, since they are not exportable as plants. We control certain things by informal arrangements with the manufacturers, the most important of which are graphite, fluorocarbons and kilns. It would have been difficult to include fluorocarbons in a statutory order since we would have been flooded with applications for, for example, the refrigerating fluid in certain refrigerators. We are also satisfied that we have a sufficient control on the movement of rare earth elements by informal arrangement.

My colleagues in the Division of Atomic Energy have examined your list and are unable to suggest anything which they would consider as an omission. They thought that luminous compounds and thoriated tungsten wire in your list seemed hardly to merit control and that perhaps the very short half-life of radon made its control a little academic.

I am sending a copy of this letter to Mr. Jarvis in Canada. I need hardly add that as in your case our regulations do not constitute a ban on export but simply a control and we have already discussed the considerations which lead us to approve or reject an application. I should be very glad to receive any comments which you or Mr. Jarvis may care to make on this letter.

Yours sincerely,

(sgd.) A.K. Longair

AKL/bh

c.c. Mr. G.M. Jarvis
Mr. R. Gordon Arneson
Mr. J.N. Henderson
Mr. M.W. Perrin

HOUSE OF COMMONS

Friday, February 11, 1949.

EXPORT AND IMPORT PERMITS ACT

Report of Operations for 1948 - Removal from
Control of a Number of New Items

Mr. G.J. McIlraith (Parliamentary Assistant to
the Minister of Trade and Commerce):

Mr. Speaker, I wish to table the report of the
operations for the year 1948 under the Export and
Import Permits Act. I wish to table also copies
of order in council P.C. 570, dated February 8, 1949,
consolidating all outstanding amendments to the list
of items under export control, and at the same time
removing from control a substantial number of new
items. As a result, the number of articles for which
export permit is required is reduced from 520 as of
January 1, 1948, to 275.

DEPARTMENT OF TRADE AND COMMERCE

EXPORT PERMIT BRANCH

Ottawa, Canada

DOMINION OF CANADA

EXPORT PERMIT REGULATIONS

LIST OF COMMODITIES FOR WHICH
AN EXPORT PERMIT IS REQUIRED

AS OF

FEBRUARY 8th, 1949.

ESTABLISHED BY ORDER IN COUNCIL P.C. 570

EFFECTIVE FEBRUARY 8th, 1949.

Issued by authority of

The Right Honourable C.D. HOWE, Minister of Trade and Commerce.

SCHEDULE OF GOODS REQUIRING AN EXPORT PERMIT

GROUP 1 - AGRICULTURAL AND VEGETABLE PRODUCTS

- Item 1. Cereal and bakery products as follows:
Biscuits.
Breakfast cereals (except oatmeal and rolled oats).
Macaroni; vermicelli; spaghetti; noodles; and
other alimentary paste products.
2. Cocoa beans.
3. Grains and grain products as follows:
Barley (except pot and pearl).
Oats (except rolled oats, oat groats or hulled oats,
oat middlings, shorts or oatmeal).
Rye.
Wheat; wheat flour; wheat bran; wheat shorts; wheat
middlings; wheat germ; wheat germ middlings.
Mixed feeds of all kinds, including any mixture
containing any grains listed in this Item, but
not including cake meal or other vegetable
protein feeds.
Rice; rice flour, rice meal.
Screenings of any grain or flaxseed.
4. Sugar and sugar products as follows:
Corn syrup; glucose syrup; any other syrup containing
sugar or glucose.
Glucose.
Molasses, edible.
Sugar; invert sugar.
5. Vegetables as follows:
Potatoes of all kinds.
6. Vegetable oil seeds and materials as follows, and all
oils and fats made therefrom;
Castor; dehydrated castor.
Chinawood (Tung).
Cocoanut.
Copra.
Corn (oil only).
Cottonseed.
Oiticica
Olive; olive kernel and foots.
Palm; palm kernel.
Peanuts; groundnuts.
Rapeseed.
Salad dressing containing oil.
Sesame.
Shortening; other compounded cooking fats or oils.
Soybean; soybean flour (full fat only).
Sunflower seed.
Teaseed.
Vegetable foots or soapstock; fatty acids.
Vegetable stearin.
Vegetable tallow.
Weed seed, including wild mustard seed.

GROUP 2 - ANIMALS AND ANIMAL PRODUCTS

- Item 1. Live animals and poultry as follows:
Hogs, except pure-bred stock when accompanied by
documents from the National Livestock Records
giving proof of registration,
Horses, of a value of \$40 or less per head, if
exported from New Brunswick, Nova Scotia,
Ontario, Prince Edward Island or Quebec.
Poultry in a lot exceeding \$15.00 in value.

- Item 2. Dressed animals, poultry and products as follows:
Hogs, dressed, and other edible pork products
(except brains, casings, ears, feet, hearts,
hog bungs, hog bung caps, kidneys, livers,
scalps, skins, snouts, stomachs, tails, and
ground or comminuted canned pork products).
Horsemeat.
Poultry in a lot exceeding \$15.00 in value.
3. Animal products as follows:
Bones of all kinds, except edible fresh frozen bones.
Glands and glandular organs, n.o.p.
Glandular products in all forms, whether concentrated,
liquid or desiccated, including ox gall (or ox
bile), sheep gall, hog gall, and spleen.
Pancreas (bovine).
Rennet; rennet preparations.
Stomachs (calves).
4. Eggs in the shell; whole eggs, egg yolks or egg albumen,
whether dried, evaporated, desiccated, powdered,
frozen or otherwise prepared.
5. Dairy products as follows:
Butter.
Buttermilk (liquid).
Cheese.
Ice cream; ice cream mix.
Milk or cream (fresh).
Milk products, concentrated.
Whey, liquid.
6. Oils, fats and greases, edible or inedible, as follows:
Animal fats and greases, n.o.p.
Degras; wool grease.
Fat waste, scrap and offal.
Fish body and viscera oils of common cod, halibut
(head), herring and pilchard.
Fats or soapstock.
Lard; lard oil.
Neatsfoot.
Oleic acid or red oil.
Oleine; oleo oil; oleo stock.
Stearin; stearic acid.
Tallow.

GROUP 3 - FIBRES, TEXTILES AND TEXTILE PRODUCTS

- Item 1. Fibres as follows:
Jute burlaps; jute bags (except when used); jute
manufactures, n.o.p.

GROUP 4 - WOOD AND WOOD PRODUCTS

NOTE: The abbreviation UK after an item indicates that
no permit is required to ship the item indicated
to the United Kingdom.

- Item 1. Logs and lumber of the following species of wood:
Birch (UK logs and lumber).
Cedar (UK lumber).
Douglas fir (UK lumber).
Hemlock (UK lumber).
Hardwood, n.o.p.
Maple (UK logs and lumber).
Spruce (UK lumber).
Softwood, n.o.p. (UK lumber).
White pine (UK lumber).
Piling and poles of any species of wood.

- Item 2. Manufactured products as follows:
- Cedar shingles.
 - Doors; sash; millwork.
 - Fence posts.
 - Flooring of all kinds.
 - Houses, pre-fabricated or pre-cut.
 - Lath.
 - Mill waste, sawdust and hog fuel if exported from British Columbia.
 - Pickets.
 - Plywood (UK).
 - Railway ties.
 - Shims, hardwood track.
 - Veneers (UK).
 - Wallboards; building boards (Building papers - see Group 7)
3. Pulpwood of the following species;
- Balsam.
 - Hemlock.
 - Jack Pine.
 - Poplar.
 - Spruce.

GROUP 5 - IRON AND STEEL, (INCLUDING ALLOY STEEL) AND THEIR PRODUCTS.

- Item 1. Primary products as follows:
- Castings; forgings.
 - Ingots.
 - Pig iron.
 - Scrap iron and scrap steel of all kinds.
2. Rolling mill products of all kinds, including:
- Bands.
 - Bars.
 - Hoops.
 - Piling.
 - Plates, coated or uncoated.
 - Rails.
 - Rods.
 - Sheets, coated or uncoated.
 - Steel alloys, including stainless steel.
 - Strips.
 - Structural steel products, including those fabricated.
 - Tie plates; track material.
 - Tin mill black plate.
 - Tin plate; terne plate.
3. Machinery and parts as follows:
- Agricultural implements and machinery; parts for the same in a lot exceeding \$25 in value.
 - Ball bearings; roller bearings; bearing parts.
 - Dairy equipment; parts for the same.
 - Laundry or dry cleaning equipment; parts for the same.
 - Machinery or machine tools n.o.p., new, used or rebuilt; parts for the same in a lot exceeding \$25 in value.
- (NOTE: Some items listed separately in previous lists are now included in the foregoing general items).
4. Automobiles and automotive equipment as follows:
- Automobiles (passenger); chassis and engines for the same.
 - Excavating and power shovels; parts for the same.
 - Motor graders.
 - Motor trucks and busses; chassis and engines for the same.
 - Tractors; equipment for the same.

- Item 5. Electrical appliances and parts as follows:
Ranges; rangettes.
Refrigerators.
Washing machines.
6. Manufactured products as follows:
Bottle closures.
Chains.
Electrical conduit.
Enamelware.
Fence posts.
Furniture for household or business use; business fixtures; parts for the same.
Hand tools; agricultural tools.
Hardware for builders, furniture makers or cabinet makers.
Hollow ware, flatware, utensils and containers, coated or uncoated.
Lavatories; sinks; plumbing fixtures.
Drums and similar containers, unfilled, new or used.
Nails; staples.
Pipes and tubes of all kinds; pipe fittings.
Precision instruments being gauges, balancing machines, measuring machines or testing machines.
Pumps (hydraulic).
Shingles; lath; corrugated roofing.
Springs for furniture or mattresses.
Storage tanks.
Tinplate containers, finished or unfinished.
Valves; parts for the same.
Welding rods; welding wire.
Wheelbarrows.
Wire, wire rope and wire fencing, coated or uncoated, plain or stranded; wire n.o.p.
Wire cloth; wire manufactures n.o.p.
7. Railway rolling stock and equipment of all kinds, complete or unassembled; parts for the same.
8. Hoisting equipment as follows:
Cranes; derricks, hoists.
Freight or passenger elevators; parts for the same.
9. Heating apparatus as follows:
Furnaces of all kinds.
Stoves of all kinds.

GROUP 6 - NON-FERROUS METALS AND THEIR PRODUCTS

- Item 1. Aluminum nails and staples.
2. Antimony in the form of ores, concentrates, semi-fabricated metal or alloys, salts, compounds or scrap.
3. Lead in the form of bullion, lead base bullion, antimonial lead, alloys, castings, pigs, bars, bars, reclaimed lead, dross or scrap, including antimonial lead scrap.
4. Manufactured products:
(a) Electrical equipment as follows and parts for the same:
Cable; conduit.
Fuse blocks.
Outlet boxes.
Receptacles,
Service boxes.
Sockets of all types.
Switches; switch boxes.
Wire, insulated.

Item 4. (Cont'd)

- (b) Hardware for builders, furniture makers or cabinet makers.
 - (c) Plumbing fixtures and fittings.
5. Radioactive elements, substances and products:
- (a) Elements as follows:
 - Beryllium.
 - Deuterium (heavy hydrogen).
 - Neptunium.
 - Plutonium.
 - Radium.
 - Thorium; mesothorium.
 - Uranium.
 - (b) Substances as follows:
 - Ores and concentrates of any of the foregoing elements including carnotite, monazite, pitchblende, uranite and uranothorite.
 - Salts and compounds containing any of the foregoing elements, including beryl, beryllia and deuterium oxide (heavy water) not excepted under Section 245 of the Atomic Energy Regulations of Canada.
 - Other radioactive substances or isotopes and all salts or compounds containing such substances or isotopes, including radon, radioactive lead, radioactive phosphorus (also known as phosphorus 32), radioactive carbon (carbon 14), radioactive cobalt (cobalt 60), and radioactive iodine (iodine 131), but not including naturally occurring potassium, rubidium, samarium and lutecium.
 - (c) Products as follows:
 - Manufactured articles containing uranium or thorium, including incandescent mantles.
 - Paints containing radium in any form, radium luminous compounds and radium fluorescent compounds.
6. Tin as follows:
 - Alloys, fabricated or semi-fabricated.
 - Babbit metal, type metal, brass metal, bronze metal and manufactured products of any such metal containing tin.
 - Salts and compounds.
 - Tin metal in any form, including scrap and tinplate scrap.

GROUP 7 - NON-METALLIC MINERALS AND THEIR PRODUCTS

- Item 1. Asbestos products as follows, in a lot exceeding \$25 in value:
 - Building products n.o.p.
 - Roofing products; shingles.
 - Wall boards.
2. Asphalt or tar products as follows, in a lot exceeding \$25 in value:
 - Floor tile.
 - Roofing products; shingles.
 - Siding products.
3. Building or sheathing papers, dry, saturated or laminated, in a lot exceeding \$25 in value.

- Item
4. Coal; mineral coke.
 5. Gypsum products as follows:
 - Lath.
 - Sheathing.
 - Wall boards.
 6. Lavatories, sinks and other plumbing fixtures, in a lot exceeding \$25.00 in value.
 7. Petroleum products as follows:
 - Blending agents or anti-knock compounds of petroleum origin.
 - Gas oil; distillate fuel oil; residual fuel oil.
 - Gasoline and other motor fuels, including aviation motor fuel.
 - Kerosene.
 - Paraffin wax.

GROUP 8 - CHEMICAL AND ALLIED PRODUCTS

- Item
1. Casein.
 2. Carbon black.
 3. Fatty acids and oils, sulphated or sulphonated, or produced from vegetable oils listed in this Schedule.
 4. Fertilizers of all kinds, in a lot exceeding \$25 in value, including the following:
 - Ammonia gas, hydrous and anhydrous.
 - Ammonia solutions.
 - Ammonium nitrates; ammonium phosphates; ammonium sulphate.
 - Calcium cyanamide and products containing it.
 - Muriate of potash.
 - Potassium manure salts; potassium nitrate.
 - Sodium nitrate.
 - Sulphate of potash; sulphate of potash-magnesia.
 - Superphosphates.
 5. Helium gas.
 6. Soap of all kinds, in a lot exceeding \$25. in value.
 7. Specialty cleaning or washing compounds with soap content, in a lot exceeding \$25 in value (except for Newfoundland, British West Indies or St. Pierre and Miquelon).

GROUP 9 - ARMS, AMMUNITION, IMPLEMENTS OR MUNITIONS OF WAR:
MILITARY, NAVAL OR AIR STORES

- Item
1. (a) Rifles and carbines using ammunition in excess of calibre .22, and barrels for those weapons.
(b) Machine guns, automatic or auto-loading rifles, and machine pistols using ammunition in excess of calibre .22, and barrels for those weapons.
(c) Guns, howitzers, and mortars of all calibres, their mountings and barrels.
(d) Ammunition in excess of calibre .22 for the arms enumerated under (a) and (b) above, and cartridge cases or bullets for such ammunition; filled and unfilled projectiles for the arms enumerated under (c) above.

Item 1 (cont'd)

- (e) Grenades, bombs, torpedoes, mines and depth charges, filled or unfilled, and apparatus for their use or discharge.
- (f) Tanks, military armoured vehicles, and armoured trains.

Item 2. Vessels of war of all kinds, including aircraft carriers and submarines, and armour plate for such vessels; periscopes for submarines.

Item 3. (a) Aircraft, unassembled, assembled or dismantled, both heavier and lighter than air, which by reason of their design or construction are adapted or intended either for military or naval reconnaissance, or for aerial combat by the use of machine guns or artillery, or for the carrying and dropping of bombs, or which are equipped with or prepared for any of the arms or appliances referred to in paragraph (b) below.

(b) Aerial gun mounts and frames, bomb racks, torpedo carriers, and bomb or torpedo release mechanisms.

Item 4. (a) Revolvers and automatic pistols using ammunition in excess of calibre .22.

(b) Ammunition in excess of calibre .22 for the arms enumerated under (a) above, and cartridge cases or bullets for such ammunition.

Item 5. (a) Aircraft, unassembled, assembled, or dismantled, both heavier and lighter than air other than those included in item (3) of this group.

(b) Propellers or air screws and blades therefor, fuselages, hulls, wings, tail units, undercarriage units, and wheels for aircraft.

(c) Aircraft engines, unassembled, assembled or dismantled.

Item 6. (a) Livens projectors and flame-throwers.

(b) Chemicals as follows:
Mustard gas (dichlorethyl sulphide).
Lewisite (chlorvinylchlorarsine and dichlordivinylchlorarsine).
Methyldichlorarsine.
Diphenylchlorarsine.
Diphenylcyanarsine.
Diphenylaminechlorarsine.
Phenyldichlorarsine.
Ethyldichlorarsine.
Phenyldibromarsine
Ethyldibromarsine.
Phosgene.
Monochlormethylchlorformate.
Trichlormethylchlorformate (diphosgene).
Dichlordimethyl ether.
Dibromdimethyl ether.
Cyanogen chloride.
Ethylbromacetate.
Ethyliodoacetate.
Brombenzylcyanide.
Bromacetone
Brommethylethyl ketone
Chlorpicrin (nithrotrichloromethane).

Item 7. (a) Propellent powders.

(b) High explosives as follows:
Nitrocellulose having a nitrogen content of more than 12 per cent.
Trinitrotoluene.

Item 7. (b) cont'd.

Trinitroxylyene.
Tetryl (trinitrophenol methylnitramine or tetranitromethylanilin).
Picric acid.
Ammonium picrate.
Trinitroanisol.
Trinitronaphthalene.
Tetranitronaphthalene.
Hexanitrodiphenylamine
Pentaerythritetetranitrate (penthrite or pentrite).
Trimethylenetrinitramine (hexogen or T4).
Potassium nitrate powders (black saltpetre powder).
Sodium nitrate powders (black soda powder).
Amatol (mixture of ammonium nitrate and trinitrotoluene).
Ammonal (mixture of ammonium nitrate, trinitrotoluene, and powdered aluminium, with or without other ingredients).
Schneiderite (mixture of ammonium nitrate and dinitronaphthalene, with or without other ingredients).

Item 8.

Miscellaneous items as follows:

Fire-control instruments, military searchlights, aerial cameras and other types of military equipment containing optical elements.

Parachutes.

Technical data, including plans, specifications and other documents in design or construction of any arms, ammunition, implements or munitions of war as described in Group 9.

C O P Y

BRITISH COMMONWEALTH SCIENTIFIC OFFICE

1785 Massachusetts Ave. N.W.
Washington 6, D.C.

File No: 187-69-3

February 2, 1949.

CONFIDENTIAL

Mr. Hugh M. Beshers,
Chief, Export Control Branch,
Division of Production,
U.S. Atomic Energy Commission,
Public Health Building,
1901 Constitution Ave., N.W.
Washington, D.C.

Dear Mr. Beshers:

Thank you very much for your letter of 31st January enclosing the details of export licenses granted during the last quarter of 1948 relating to the United Kingdom. I was on the point of writing the following letter to you.

At our meeting on 10th December with Mr. Jarvis, I find that I misrepresented the position in the United Kingdom slightly but not seriously. Although we have powers under three different acts to control varying classes of materials, the powers under two of them are in reserve and all control is still exercised through the Import, Export and Customs Powers (Defence) Act, 1939. The statutory authority in this case is the Board of Trade but so far as atomic energy matters are concerned, they always refer to the Division of Atomic Energy of the Ministry of Supply. I hope to send to you within the next week or so a copy of the latest list of goods controlled under this act, incorporating the amendment which I sent to you on December 3rd, but it comes to this, that the entire list of items controlled by statutory authority is as follows:

Beryllium

Thorium

Uranium

Radio-active substances and mixtures containing such substances (including such substances or mixtures contained in cells, needles, plaques, tubes or other special containers), of the following descriptions:-

Ferro-uranium

Mesothorium compounds

Radium compounds

Thorium and its compounds

Uranium and its compounds

Mixtures containing any of the above

Amplifiers, high gain stable linear pulse, designed to operate within the range 50 c/s to 10 Mc/s, and of input resistances not less than 10 megohms

Betatrions

Centrifuges with a peripheral speed exceeding 1,000 ft./sec.

Cyclotrons and instruments of similar nature

Electroscopes, pocket and laboratory

Equipment for health monitoring against radiation hazards, excluding photographic film and equipment containing it

Furnaces, vacuum, designed to operate at pressures lower than 0.1 mm Hg and at temperatures higher than 1100°C

Geiger-Muller counter tubes

Heavy water, being water containing more than 10 per cent deuterium oxide

Instruments capable of measuring a current of less than 1 micro micro ampere

Ionization chambers

Ionization measuring equipment suitable for the radiation survey of terrain and plant sites

Ion separators, electro-magnetic, including mass spectrographs and mass spectrometers for any purpose (including leak detection)

Linear accelerators to produce particles of energies greater than one million electron volts

Magnets, A.C. and D.C., suitable for betatrions, cyclotrons and instruments of similar nature, and synchrotrons

Neutron-counters containing boron, boron trifluoride, or hydrogen

Positive-ion sources, suitable for use in cyclotrons, mass spectrometers and the like

Pumps, vacuum diffusion, of which the diameter measured inside the barrel at the inlet jet is 12 inches or more

Resistors of resistance not less than 10^{10} ohms, and instruments embodying them

Scaling units and rate meters, suitable for use in radiation detection

Scintillation counters

Synchrotrons

Valves, electrometer, designed to handle input currents less than 1 micro micro ampere and instruments embodying them

Voltage generators to produce D.C. voltage greater than one million volts, and designed to be capable of accelerating charged particles

Radiation measuring equipment and components forming an integral part of X-ray machines designed to operate at voltages under 500 Kv.

It may strike you that the list of radioactive substances g1000127

. 3 .

is not very complete but you will understand that the Minister of Supply has complete control of all artificially radioactive materials derived from the pile because they can only be produced in a plant operated by him and processed at another place (The Radiochemical Centre) which operates on an agency basis for the Ministry of Supply. It goes without saying that he has control of all fissile material.

We have not included major items, such as piles and diffusion plants, since they are not exportable as plants. We control certain things by informal arrangements with the manufacturers, the most important of which are graphite, fluorocarbons and kilns. It would have been difficult to include fluorocarbons in a statutory order since we would have been flooded with applications for, for example, the refrigerating fluid in certain refrigerators. We are also satisfied that we have a sufficient control on the movement of rare earth elements by informal arrangement.

My colleagues in the Division of Atomic Energy have examined your list and are unable to suggest anything which they would consider as an omission. They thought that luminous compounds and thoriated tungsten wire in your list seemed hardly to merit control and that perhaps the very short half-life of radon made its control a little academic.

I am sending a copy of this letter to Mr. Jarvis in Canada. I need hardly add that as in your case our regulations do not constitute a ban on export but simply a control and we have already discussed the considerations which lead us to approve or reject an application. I should be very glad to receive any comments which you or Mr. Jarvis may care to make on this letter.

Yours sincerely,

(sgd.) A.K. Longair

AKL/bh

c.c. Mr. G.M. Jarvis
Mr. R. Gordon Arneson
Mr. J.N. Henderson
Mr. M.W. Perrin

EXTERNAL AFFAIRS SECRET FILE
201-AC(a)
Sub. 29 Chron 29

M. CADIEUX/MAB
December 14th, 1948.
SECRET

Jh
5

MEMORANDUM FOR MR. IGNATIEFF

I had a call from Mr. Jarvis yesterday morning on his return from Washington. He said that the United Kingdom representative at the meeting which was held in Washington to discuss the U.K.-U.S.A.-Canada joint export control programme of atomic materials, felt that he was neither prepared nor qualified to discuss the lists which had been drafted by Mr. Wells of the United States Atomic Energy Commission and by Mr. Jarvis of our own Atomic Energy Control Board. The United Kingdom representative wanted first to have a clearance from the C.P.C. as to the type of tripartite control body which would have to be set up to operate the plan of control. The discussions were somewhat inconclusive. Mr. Jarvis is not quite sure what the next step should be. He is now drafting a report which he will submit to Dr. Mackenzie and it will no doubt be referred to you.

M. Cadieux

M. Cadieux

ONE SIGNED COPY ONLY OF THIS MESSAGE TO BE DELIVERED TO ROOM 309 — EAST BLOCK

IMMEDIATE ()

TELETYPE MESSAGE

CYPHER (X) TR

EN CLAIR / (X) TOP SECRET

File No.

EXTERNAL AFFAIRS SECRET FILE
201-AC(a)
Sub J. Chron ✓

No. EX 2809

To: THE CANADIAN AMBASSADOR - WASHINGTON

From: THE SECRETARY OF STATE FOR EXTERNAL AFFAIRS - OTTAWA

PLEASE USE DOUBLE SPACING WHEN TYPING THE MESSAGE BELOW

Following for Wright From Ignatieff Begins:

Your letter of November 19th, tripartite discussions for joint programme of atomic export control. Mr. Jarvis will be in Washington early Friday afternoon and will communicate with you. Meeting is now planned for Friday, December 10th.



Ends.

(If further space is required please use a second page)

Date December 7 Room No. 305A Bldg. Post Office Local 7129

Name of Sender M. CADIEUX Authority (Signature of person authorizing message) 000130

(Typewritten)

COMMUNICATIONS
SECTION
EXTERNAL AFFAIRS
1940 DEC 7 PM 5:26

M. CADIEUX/MAB
December 6th, 1948.
TOP SECRET

*In Ignatieff's
Cabinet*

*Mr. Tamm
has been advised that
my trip to Washington
is*

MEMORANDUM FOR MR. IGNATIEFF

With reference to the attached letter from Mr. Heeney to Mr. Wright in Washington, I attach for your signature, if you concur, a teletype to Mr. Wright advising him that a meeting will now be held on Friday, December 10th.

M. Cadieux
M. Cadieux

JL
BT

*I am sending this
teletype at Mr. Tamm's request!*
MC

EXTERNAL AFFAIRS SECRET FILE
20/ACW
Sub. Chron. 39

DEPARTMENT OF EXTERNAL AFFAIRS

OTTAWA

TOP SECRET

No.

OTTAWA, December 6th 19 48

Sir,

I have the honour to transmit to you, herewith, 1 copy
^{each of}
~~copies~~ of the paper mentioned in the subjoined schedule.

I have the honour to be,

Sir,

Your obedient servant,

G. IGNATIEFF

for the Secretary of State
for External Affairs.

EXTERNAL AFFAIRS
SECRET FILE
201-AC(S)
Sub... 29 Chron ✓

NAME AND DATE

SUBJECT

Letter from Mr. G.M. Jarvis, Secretary
of the Atomic Energy Control Board,
to the Under-Secretary of State for
External Affairs, dated December 1st,
1948, with enclosures mentioned
therein.

RE: PROPOSED U.K.-U.S.-CANADA
PROGRAMME OF EXPORT CONTROL
OF ATOMIC MATERIALS.

WASHINGTON... 3849.....

C.P.D.U.N. 795.

M. CADIEUX/MAB

December 4th, 1948.

TOP SECRET

EXTERNAL AFFAIRS

SECRET FILE

20-AC(s)

Sub. 29 Chron 29

Dr.
MEMORANDUM FOR MR. HEENEY

I attach for your signature, if you concur, an answer to Mr. Wright's letter of November 19th enquiring as to the nomination of a Canadian representative to attend the proposed discussions in Washington concerning the Joint Atomic Export Control programme.

M. Cadieux
M. Cadieux

*I presume you've
told Jarvis of this however*

Dr.

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub. 29 Chron ... ✓

M. CADIEUX/MAB
FILE COPY

TOP SECRET

OTTAWA, December 4th, 1948.

Dear Mr. Wright,

With reference to your letter of November 19th, 1948, concerning the Canadian representative who might attend the preliminary meeting to discuss the Atomic Export Control Programme, this is to advise you that I have discussed the matter with Dr. Mackenzie who has nominated Mr. Jarvis who, in his opinion, has the necessary experience and qualifications for this particular purpose. Mr. Jarvis, I presume, would be prepared to go to Washington to attend this meeting any time a date has been agreed upon by the local British and American representatives.

Yours sincerely,

A.D.P. Heeney, Chairman,
Advisory Panel on Atomic
Energy

A.L. Wright, Esq.,
Attaché,
Canadian Embassy
WASHINGTON, D.C.

*Longair
Mr. Longair
Mr. Longair*

13-C1
23-1
10-5

SECRET
BY BAG

1 December 1948

Mr. A.K. Longair,
United Kingdom Scientific Mission,
1785 Massachusetts Avenue N.W.,
WASHINGTON 6, D.C.
U.S.A.

201-AC(S)		
24		31

Dear Mr. Longair:

I beg to acknowledge with thanks receipt of your letters of the 9th and 26th ultimo which reached me through Chalk River.

I understand that there may be a meeting some time soon at which Canada will be represented to discuss various questions arising in this field but that specific arrangements for this have not yet been made.

Yours faithfully,

G. M. Jarvis,
Secretary.

GMJ:r

Copies to: Mr. G. Ignatieff.

C O P Y

A Unit of
BRITISH COMMONWEALTH SCIENTIFIC OFFICE

1785 Massachusetts Ave., N.W.
WASHINGTON 6, D.C.

File No:
187-69-3

CONFIDENTIAL

November 26, 1948

Mr. Hugh M. Beshers,
U.S. Atomic Energy Commission,
Public Health Building,
1901 Constitution Ave., N.W.
Washington 25, D.C.

Dear Mr. Beshers,

I have now had some instructions from home about the control of export of atomic energy equipment. I suggest that, after studying this letter, Mr. Derry and you may care to meet Mr. Dancer and myself at an early date to discuss it.

In the first place, to clear away a small point, you will know that under E.C.A. (Clause 117D, I believe) countries receiving certain American equipment are required to forbid or control re-export to Eastern Europe. The U.S.A. has drawn up certain lists of equipment whose export to Eastern Europe should be controlled, and the U.K. is co-operating by drawing up corresponding lists. This is merely to say that, so far as atomic energy equipment is concerned, control of export from U.K. will be settled directly between the Department of Atomic Energy in U.K. and the Atomic Energy Commission in U.S.A., and not through the general E.C.A. arrangements. This, I am sure, was your intention also.

The following, in brief are our proposed arrangements. As you will have gathered from my previous letter, the Board of Trade in U.K. will be the statutory authority controlling export. They will, however, act on information supplied by the Department of Atomic Energy, and applications for permission to export will be referred by the Board of Trade to the Department of Atomic Energy. A small informal committee within the Department of Atomic Energy will consider and decide on the applications received.

The Committee will, in the first place, be guided by the following principles:

- (a) All applications for export to Eastern Europe, including Finland, will be refused.
- (b) Applications for export to the U.S.A. and the old Dominions of the British Commonwealth will, in general, be allowed.

In the case of an application for export to U.S.A., Department of Atomic Energy will consult U.S.A.E.C. before recommending grant of the export license.

- (c) Applications for all other countries will be considered on their merits. Decisions will depend on the political standing of the country concerned; the size of the order; and the stated purpose for which the equipment is required.

In connection with (c), I informed you in my letter of 9th November that U.K. was prepared to consult with U.S.A. and Canada in doubtful cases.

We should like to suggest that the Department of Atomic Energy and the Atomic Energy Commission should exchange at intervals of three months information about applications for export which have been approved or rejected. Appropriate details for such a record might be

Details of applicant and consignee
Description and quantity of equipment ordered
Stated purpose for which required
Decision

It will be some time before we have enough experience to know how our machinery works; we should like to suggest that after, say, six months you might care to send a representative to U.K. to discuss how the control is working in both countries.

I am sending a copy of this letter to Mr. Jarvis in the Canadian Atomic Energy Control Board, also to Mr. Arneson in your State Department.

Yours sincerely,

"A.K.L."

A. K. Longair

AKL/bm

cc: Mr. Jarvis
Mr. Arneson

13-C1
23-1
10-5

S E C R E T
BY BAG

1 December 1948

Mr. A.K. Longair,
United Kingdom Scientific Mission,
1785 Massachusetts Avenue N.W.,
WASHINGTON 6, D.C.
U.S.A.

Dear Mr. Longair:

I beg to acknowledge with thanks receipt of your letters of the 9th and 26th ultimo which reached me through Chalk River.

I understand that there may be a meeting some time soon at which Canada will be represented to discuss various questions arising in this field but that specific arrangements for this have not yet been made.

Yours faithfully,

G. M. Jarvis,
Secretary.

GMJ:r

Copies to: Mr. G. Ignatieff.

C O P Y

A Unit of
BRITISH COMMONWEALTH SCIENTIFIC OFFICE

1785 Massachusetts Ave., N.W.
WASHINGTON 6, D.C.

File No:
187-69-3

CONFIDENTIAL

November 26, 1948

Mr. Hugh M. Beshers,
U.S. Atomic Energy Commission,
Public Health Building,
1901 Constitution Ave., N.W.
Washington 25, D.C.

Dear Mr. Beshers,

I have now had some instructions from home about the control of export of atomic energy equipment. I suggest that, after studying this letter, Mr. Derry and you may care to meet Mr. Dancer and myself at an early date to discuss it.

In the first place, to clear away a small point, you will know that under E.C.A. (Clause 117D, I believe) countries receiving certain American equipment are required to forbid or control re-export to Eastern Europe. The U.S.A. has drawn up certain lists of equipment whose export to Eastern Europe should be controlled, and the U.K. is co-operating by drawing up corresponding lists. This is merely to say that, so far as atomic energy equipment is concerned, control of export from U.K. will be settled directly between the Department of Atomic Energy in U.K. and the Atomic Energy Commission in U.S.A., and not through the general E.C.A. arrangements. This, I am sure, was your intention also.

The following, in brief are our proposed arrangements. As you will have gathered from my previous letter, the Board of Trade in U.K. will be the statutory authority controlling export. They will, however, act on information supplied by the Department of Atomic Energy, and applications for permission to export will be referred by the Board of Trade to the Department of Atomic Energy. A small informal committee within the Department of Atomic Energy will consider and decide on the applications received.

The Committee will, in the first place, be guided by the following principles:

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- (b) Applications for export to the U.S.A. and the old Dominions of the British Commonwealth will, in general, be allowed.

In the case of an application for export to U.S.A., Department of Atomic Energy will consult U.S.A.E.C. before recommending grant of the export license.

- (c) Applications for all other countries will be considered on their merits. Decisions will depend on the political standing of the country concerned; the size of the order; and the stated purpose for which the equipment is required.

In connection with (c), I informed you in my letter of 9th November that U.K. was prepared to consult with U.S.A. and Canada in doubtful cases.

We should like to suggest that the Department of Atomic Energy and the Atomic Energy Commission should exchange at intervals of three months information about applications for export which have been approved or rejected. Appropriate details for such a record might be

Details of applicant and consignee
Description and quantity of equipment ordered
Stated purpose for which required
Decision

It will be some time before we have enough experience to know how our machinery works; we should like to suggest that after, say, six months you might care to send a representative to U.K. to discuss how the control is working in both countries.

I am sending a copy of this letter to Mr. Jarvis in the Canadian Atomic Energy Control Board, also to Mr. Arneson in your State Department.

Yours sincerely,

"A.K.L."

A. K. Longair

AKL/bm

cc: Mr. Jarvis
Mr. Arneson

CABLE ADDRESS "RESEARCH"

IN YOUR REPLY PLEASE QUOTE

FILE No.....



NATIONAL RESEARCH COUNCIL
CANADA

TOP SECRET

OFFICE OF THE PRESIDENT

OTTAWA November 30, 1948.

Mr. A.D.P. Heeney,
Chairman, Advisory Panel on
Atomic Energy,
Privy Council Office,
O t t a w a.

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub. 29 Chron

Dear Mr. Heeney:

I received your letter of November 26 and, after having read the attached correspondence, I think your suggestion that Mr. Jarvis might be nominated is a sound one as he seems to have the necessary experience and qualifications for this particular purpose.

Yours sincerely,

C. J. Mackenzie
C. J. Mackenzie,
President.

Mr. Landry

It's be grateful if you'd arrange

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub... Chron... 9...

M. CADIEUX/MAB
FILE COPY
TOP SECRET

OTTAWA, November 26th, 1948.

Dear Dr. Mackenzie,

I attach copies of the following correspondence which has been received from the Canadian Embassy in Washington concerning the atomic export control programme under consideration by C.P.C. officials there:

May 19th	Letter from Mr. Gullion to Mr. Stone (with attachments)
May 20th	Letter from Mr. Stone to Mr. Pearson
Sept. 23	Letter from Mr. Escott Reid to Mr. Wrong
Oct. 2nd	Letter from Mr. Stone to Mr. Arneson
Oct. 2nd	Letter from Mr. Stone to Mr. Escott Reid
Oct. 30th	Letter from Mr. Ignatieff to Mr. Wrong
Nov. 9th	Letter from Mr. Arneson to Mr. Wright
Nov. 12th	Letter from Mr. Wright to Mr. Ignatieff

Mr. Arneson of the State Department has now advised verbally the Embassy that local British and American representatives could meet at short notice any Canadian representative who might be nominated to discuss the export control programme. He is of the opinion that the preliminary meeting should be entirely informal and should more assess the difficulties of the problem than attempt to reach a formal solution at this time.

Mr. Wrong has suggested that we might wish to arrange for the nomination of a Canadian representative in consideration of the broader issue of export controls rather than the purely atomic problem. Upon examination of the various papers referred to above, I find that the discussions, although related to E.C.A. and the general problem of export controls, will be concerned chiefly with

Dr. C.J. Mackenzie,
President,
National Research Council,
OTTAWA

- 2 -

atomic materials and instruments, and I venture to suggest that Mr. Jarvis might be qualified for this nomination in view of his discussions with export control and customs officials here.

I should appreciate receiving your views as to the foregoing, and particularly as to the representative which you propose to nominate for this purpose.

Yours sincerely,

(Sgd) A.D.P. Heeney
Chairman, Advisory Panel
on Atomic Energy

EXTERNAL AFFAIRS SECRET FILE
201-AC(B)
Sub. Chron.

M. CADIEUX/MAB
November 25th, 1948.
TOP SECRET

*see
61*

MEMORANDUM FOR MR. HEENEY

It now appears, concerning the programme of atomic export control, that:

- (a) the Americans propose to associate a number of other European countries to ensure that atomic energy materials are not shipped to Eastern European areas; and,
- (b) U.S. and U.K. representatives in Washington are prepared, almost any time, to meet a Canadian representative for preliminary and informal discussions.

2. The immediate problem, therefore, is that of selecting the Canadian representative and determining when he can go to Washington. Mr. Wrong suggests that the nomination of the Canadian representative should take into account the broader issue of export controls rather than the purely atomic problem. It is true that the State Department relates this problem of export controls to the E.C.A. machinery. But it seems that the discussions will deal exclusively with the export control of atomic energy materials and instruments. I have therefore drafted for your signature, if you concur, a letter to Dr. Mackenzie asking him to nominate the Canadian representative and indicating that Mr. Jarvis might be suitable for this purpose.

M. Cadieux

M. Cadieux



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

TOP SECRET
BY HAND

PLEASE REFER
TO FILE 13-C1
10-5
23-1

refile

25 November 1948

The Under-Secretary of State for
External Affairs,
O T T A W A

Attention: Mr. George Ignatieff

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub. 29 Chron...✓...

Dear Mr. Ignatieff:

This will acknowledge receipt of your letter of the 16th instant concerning the proposed U.K.-U.S.-Canada parallel programme of export control of atomic materials with its enclosures and copy of your letter of the 17th instant to Mr. Wrong. I assume that we shall hear further as to the date of the proposed conference in due course.

I am noting for discussion at this meeting, the suggestions made in your letter of the 6th instant with regard to the sale of radioactive substances for delivery outside of the three countries.

Yours sincerely,

G. M. Jarvis,
Secretary.

GMJ:r

13-C1
10-5
File No. 23-1

R E C E I P T

TO: Mr. George Ignatieff Date... 25 Nov. 1948

(Original to be signed personally by the recipient and returned to the sender. Duplicate to be retained by the recipient addressed.)

I have personally received from .. G.M. Jarvis the documents identified below, which have been classified as **Top Secret**

I assume full responsibility for the safe handling, storage and transmission elsewhere of these documents in accordance with existing regulations governing handling of material so classified.

The classified material is identified as follows:

DESCRIPTION:

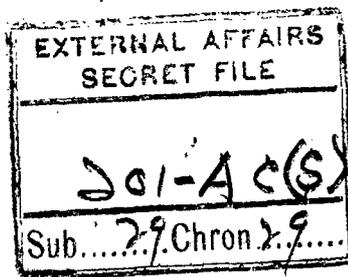
Ltr. of this date to Mr. Ignatieff from Mr. Jarvis.

VIA: .. BY HAND

Please sign and return to: The Secretary,
Atomic Energy Control Board,
O T T A W A, Ontario.

.....
(Date)

.....
(Received by)



TOP SECRET.

Washington, D. C.,
November 19th, 1948.

Dear Mr. Heeney:

The Ambassador has requested that you be briefed on the status of the atomic export control problem under consideration by C.P.C. officials here.

To this end, attached please find copies of the following correspondence:

- _____ May 19th. Letter from Mr. Gullion to Mr. Stone (with attachments).
- _____ May 20th. Letter from Mr. Stone to Mr. Pearson.
- _____ Sept. 23rd. Letter from Mr. Escott Reid to Mr. Wrong.
- _____ Oct. 2nd. Letter from Mr. Stone to Mr. Arneson.
- _____ Oct. 2nd. Letter from Mr. Stone to Mr. Escott Reid.
- _____ Oct. 30th. Letter from Mr. Ignatieff to Mr. Wrong.
- _____ Nov. 9th. Letter from Mr. Arneson to Mr. Wright.
- _____ Nov. 12th. Letter from Mr. Wright to Mr. Ignatieff.

Mr. Arneson of the State Department has now advised verbally that local British and American representatives could meet at short notice any Canadian representative who might be nominated to discuss the export control problem. He is of the opinion that the preliminary meeting should be entirely informal and should more assess the difficulties of the problem than attempt to reach a formal solution at this time.

Mr. Wrong has suggested that you may wish to arrange for the nomination of a Canadian representative in consideration of the broader issue of export controls rather than the purely atomic problem.

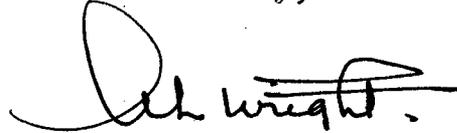
It would be appreciated if the name of the Canadian representative and the date he could be available for/

②
A. D. P. Heeney, Esq.,
Secretary to the Cabinet,
Office of the Privy Council,
Ottawa, Canada.

-2-

for discussion in Washington were forwarded, in order that plans may be consolidated with both British and American representatives for the proposed meeting.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "J. H. Wright". The signature is written in dark ink and is positioned below the typed text "Yours sincerely,".

COPY

TOP SECRET

Washington 6, D.C.,
November 12th, 1948.

Dear Mr. Ignatieff:

This office would refer to your letter dated 30th October to the Canadian Ambassador in respect of the establishment of a parallel U.S.-U.K.-Canadian program of export controls of atomic material.

I have had occasion to discuss this matter personally with Messrs. Arneson and Wendel at the State Department and am enclosing copy of a letter just received in reply to Mr. Stone's letter of 2nd October. The U.S. view is, it is thought, fairly well expressed.

Mr. Arneson has verbally suggested that a preliminary conference to discuss the extent of the control problem might be held within the next month and is contacting the local parties involved prior to recommending a specific date.

Your further views in this matter would be most welcome.

Yours sincerely,

(Sgd.) A.L. Wright

George Ignatieff, Esq.,
Department of External Affairs,
Ottawa, Canada.

COPY

This document consists of 2 pages
Copy No. 1 of 6 series A

SECRET

DEPARTMENT OF STATE
Washington

November 9, 1948.

Dear Mr. Wright:

In accordance with Mr. Stone's note of October 8 to Mr. Wendel I am addressing this reply to Mr. Stone's letter of October 2 to you.

Since the date of Mr. Gullion's letter of May 19, 1948, there have been several developments concerning export controls in which you will be interested. On June 3 Mr. Frederick H. Warren, then Chief of the Production Facilities Control Branch of the Atomic Energy Commission, transmitted to Colonel Curtis Nelson a detailed list of items suggested for inclusion in a parallel control scheme. This list was more inclusive than that accompanying Mr. Gullion's letter of May 19 and, in addition, designated the respective groups of items falling under the several control mechanisms employed by this Government. I am attaching for your information a copy of this list with certain amendments.

Another development in which you will be interested is the move taken by this Government in August to initiate discussions with several European Governments looking toward the establishment of controls over atomic energy materials similar to those practised by the United States to the end that shipment of these materials to Soviet dominated countries would be blocked. During Congressional consideration of the Economic Cooperation Act of 1948 and during the initial phases of administrative interpretation of that Act by the organization established to implement it, the Department of State took the position that all atomic matters affecting ECA countries should be handled separately by the Department in cooperation with the Atomic Energy Commission. This view has been accepted by all concerned. It has meant, however, that the Department has been obliged to move with some despatch to explore the possibility of securing the cooperation of ECA countries in exercising controls over the export of atomic energy materials and equipment.

To this end preliminary conversations have been initiated with the appropriate officials in the governments of the following countries: Sweden, Norway, The Netherlands, Belgium, Italy, and Switzerland, to ascertain (1) the extent to which the subject materials are produced or are capable of being produced in each country, (2) whether any significant orders to Eastern Europe are now pending, (3) what supervision or controls, either official or unofficial, are now exercised over export of such items, and (4) whether it might be desirable to offer technical assistance of the ECA to delineate specifically the items of importance in this

Mr. A.L. Wright,
Attaché,
Canadian Embassy.

- 2 -

field. Replies have now been obtained from the governments of Sweden and Norway which give satisfactory assurances that no shipment of significant atomic energy equipment or materials is being made or will be made in the future to Soviet dominated areas from these countries. We are hopeful that similar assurances will be forthcoming from the other countries concerned.

Included in the instructions sent to our missions in Europe were two lists of material and equipment for which similar controls were sought. These lists are attached. List A enumerates the items requiring AEC export licenses in accordance with published regulations issued by the AEC. List B contains those items controlled by AEC through governmental liaison with the Office of International Trade of the Department of Commerce, supplemented by voluntary manufacturer compliance. List B as transmitted is not as inclusive as the list sent Colonel Nelson by Mr. Warren because it was considered unnecessary and undesirable from a security point of view to include certain items which it was believed could not be produced in continental European countries. Since knowledge of the contents of List B would probably be of considerable interest to the Soviets, our missions have been instructed to handle inquiries on these items with caution.

Preliminary to such three-way technical discussions as may be desirable, I feel it would be useful to have your reactions to the program indicated above and to learn what steps your Government, on its part, has taken in this matter.

I am sending a copy of this letter and enclosures to Nicko Henderson.

Sincerely yours,

(Sgd.) R. Gordon Arneson

Special Assistant to the
Under Secretary.

Enclosures:

List of Commodities under Export Control
of OIT, authorized by AEC
Suggested Items
Proposed Categories
List A
List B

CONFIDENTIAL

LIST OF COMMODITIES UNDER EXPORT CONTROL OF OFFICE OF
 INTERNATIONAL TRADE, DEPARTMENT OF COMMERCE, AUTHORIZED
 BY AEC

Dept. of Commerce
 Schedule B No.

Commodity

770810	Mechanical (Dry) Vacuum Pumps: With a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
770670	Diffusion Vacuum Pumps: 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
775000	Parts for mechanical (dry) vacuum pumps with a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
775098	Parts for diffusion vacuum pumps, 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
829960	Chemical Specialties: Diffusion pump oils (oils enabling the attainment of vacuum of 10-4 millimeters of mercury pressure absolute in a single stage diffusion pump) (include silicone diffusion pump fluids)
707410	Induction furnaces, vacuum metal-melting only, and component parts therefor.
663900	Thoriated tungsten wire
664905	Beryllium metal
664910	Bismuth metals and alloys
664950	Radium metal (radium content)
664996	Callium metal
664998	Polonium metal
815590	Radium salts and compounds for medical use
815590	Radon (radium emanations)
813590	Chemicals containing artificial radioactive isotopes
839900	Actinium bearing salts and compounds
839900	Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
839900	Chemicals containing artificial radioactive isotopes
839900	Callium salts and compounds

- 2 -

839900

Polonium bearing salts and compounds

839800

Radium ore concentrates

839800

Radium salts and compounds (radium
content)

843800

Paints containing radium

CONFIDENTIAL

SUGGESTED ITEMS FOR HANDLING
BY INDUSTRY LIAISON

Fluorocarbons

High Purity graphite

Powdered nickel and special nickel fabrications

Especially pure refractories for exceptionally high temperatures
(such as beryllia, zircon and others)

Insulators of exceptionally high dielectric strength at elevated
temperatures (such as high zircon and high alumina content)

Unusual metals and chemicals, especially when of exceptionally
high purity including rare earths

High precision laboratory instruments

Potentiometers
Resistance Bridges
Spectrophotometers
Microphotometers
Spectrographs
Oscillographs
Galvanometers

Magnetic separators for ores

Electronic devices for controlling and/or recording flow in in-
dustrial processes

High voltage Power Tubes

Vacuum gauges (ionization type)

CONFIDENTIAL

PROPOSED CATEGORIES OF INSTRUMENTS FOR LICENSING
(As listed in Schedule B(a))

<u>Conventional</u> <u>(Info. only)</u>	<u>Restricted Flow</u> <u>(Based on quantity)</u>	<u>Critical</u> <u>(in any quantity)</u>
	(i) G-M scalers	(i) Parallel plate counter scalers
	(ii) G-M counter rate meters	Proportional counter scalers
	(iii) Scalers	(ii) Proportional counter rate meters
	(iv) G-M audio or mechanical detectors	(iv) Proportional audio or mechanical detectors
(v) Integrating ionization chamber meter	(v) Ionization chamber rate meter	(vi) Proportional or parallel plate counter detector components
(vi) G-M counter tubes	(vii) Micromicroammeters	
	(viii) Counter pulse rate meters	
	(ix) High gain high impedance linear pulse amplifier	
(x) G-M quenching units		
(xi) G-M or proportional coincidence units		
(xii) Electroscopes and electrometers, pocket and survey types, including dosimeters		(xii) Electrometers, Vibrating Reed

COPY

-2-

Conventional
(info. only)

Restricted Flow
Based on quantity

Critical
In any quantity

(xiii) Chambers, pocket
type, with
electrometer
charger-reader

(xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micromicro-amperes, such as FR-54, RE-507, CK-570AX, VX-32, and VX-41, and equivalent

(xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micromicro-amperes, such as FR-54, RE-507, CK-570AX, VX-32, and VX-41, and equivalent

(xv) Resistors, values above
1,000 megohms

LIST A

Materials

1. Uranium metal, thorium metal, metals and alloys containing uranium and thorium.
2. Uranium compounds, including the following:
 - a. Uranium (or uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium dioxide (thoria)
4. Monazite sand or other thorium containing ores
5. Carnotite, pitchblende or other uranium containing ores

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material).
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., and electromagnetic or gaseous diffusion process
 - c. Electronuclear machines
 - (1) Cyclotrons
 - (2) Betatrons
 - (3) Synchrotrons
 - (4) Synchro-cyclotrons
 - (5) Van de Graaff machine (electrostatic generators)
 - (6) Linear accelerators
2. Class II Facilities
 - a. Radiation detection instruments and their components
 - (1) Geiger Mueller, proportional or parallel plate counter scalers
 - (2) Geiger Mueller or proportional counter rate meters
 - (3) Scalars, all types adaptable to radiation detection
 - (4) Geiger Mueller, proportional audio, or mechanical detectors
 - (5) Integrating ionization chamber meters and ionization chamber rate meters
 - (6) Geiger Mueller, proportional, or parallel plate counter detector components
 - (7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere
 - (8) Counter pulse rate meters
 - (9) High gain, high impedance linear pulse amplifiers
 - (10) Geiger Mueller quenching units
 - (11) Geiger Mueller or proportional coincidence units
 - (12) Electrosopes and electrometers, pocket and survey types, including dosimeters
 - (13) Chambers, pocket type, with electrometer charger-reader
 - (14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere
 - (15) Resistors, values above 1,000 megohms

- 2 -

- b. Mass spectrometers and mass spectrographs including components.
 - (1) Ion sources, mass spectrometer or spectrograph types
 - (2) Acceleration and focusing tubes
 - (3) Ionization chambers
 - (4) Micromicroammeters
 - (5) Electrometer type tubes as above
 - (6) Resistors, values over 1,000 megohms
- c. Leak detectors, mass spectrometer type
- d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet)

COPY

LIST B

Materials

1. Beryl, Beryllium metal, beryllium alloys, beryllium oxides and other beryllium compounds, in all forms, except fabricated alloys.
2. Elemental fluorine, fluorocarbons and fluorine compounds, except hydrofluoric acid and fluorapar.
3. Zirconium oxide in all forms.
4. Graphite, artificial (excluding integral parts of equipment).
5. Diffusion pump oils (oils enabling the attainment of vacuum of 10⁻⁴ millimeters of mercury pressure absolute in a single stage diffusion pump; including silicone diffusion pump fluids).
6. The following metals and their compounds: germanium, indium, rhenium, rhodium. Also cerium (except in lighter flints and abrasives), lanthanum, and all other rare earths.
7. Heavy water. (Applicable to Norway and Italy only).

Equipment

1. Mechanical (dry) vacuum pumps, with capacities of 20 cfm or more and capable of producing a vacuum of 1 mm of mercury pressure.
2. Diffusion vacuum pumps, mercury and oil types, 5" to 12" in diameter at inlet jet.
3. Induction furnaces for melting metals under vacuum.
4. The following high precision laboratory instruments:
 - Spectrophotometers
 - Microphotometers
 - Spectrometer, optical
 - Galvanometers (except student types)
5. Vacuum gauges (ionization type).
6. Valves, bellows type, except as integral parts of equipment.
7. Stainless steel pumps.
8. Centrifuges, stainless steel industrial process type.
9. Glass working lathes.
10. Insulators of especially high dielectric strength at elevated temperatures (such as high zirconia and high alumina content).
11. Electrolytic cells for the production of fluorine.
12. Especially pure refractory materials for exceptionally high temperatures, including fabricated forms. (Such as beryllia, zirconia, and alumina.)

(C O P Y)

TOP SECRET

DEPARTMENT OF EXTERNAL AFFAIRS
CANADA

OTTAWA, October 30th, 1948.

Dear Mr. Wrong:

I wish to refer to Mr. Stone's letter to Mr. Reid of October 2nd, 1948, and to previous correspondence concerning parallel U.S.-U.K.-Canada programme of export controls. I should be glad to learn whether any answer from the State Department has been received to Mr. Stone's letter to Mr. Gordon Arneson of October 2nd, 1948. Apparently Mr. Wells of the Atomic Energy Commission has communicated informally with Mr. Jarvis of the Atomic Energy Control Board here suggesting that informal preliminary talks might take place between a representative of the Commission, the United Kingdom and a representative of the Atomic Energy Control Board in Ottawa. Before going any further I should be interested in knowing whether a corresponding action has been taken by the State Department. As you know, we have not taken the initiative in this matter and our position is that if the U.S. authorities wish to discuss a parallel programme of export controls, Canadian officials have been authorized to take part in these discussions.

Yours sincerely,

(Sgd.) G. IGNATIEFF

for the Acting Under-Secretary of State
for External Affairs.

H. H. Wrong, Esq.,
Canadian Ambassador to the
United States,
Washington, D.C.

(C O P Y)

SECRET

Washington, D.C.,
October 2, 1948.

Dear Mr. Reid:

With reference to your letter of September 23rd to the Ambassador, I enclose herewith a copy of a self-explanatory letter which I have today sent to Gordon Arneson of the State Department, concerning parallel U.S.-U.K.-Canada programme of export controls.

Yours sincerely,

(Sgd.) T.A. STONE

Escott Reid, Esq.,

Acting under-Secretary of State

for External Affairs,

Ottawa, Canada.

(C O P Y)

SECRET

Washington, D.C.,
October 2, 1948.

My dear Gordon:

On May 19th last, Ed Gullion wrote to me sending forward a list prepared by the United States Atomic Energy Commission of items which the Commission believes should be covered in a parallel U.S.-U.K.-Canada programme of export control. I believe that since Ed's letter was written, Jarvis of our Atomic Energy Control Board in Ottawa learned unofficially that if the U.K. and the Canadian Governments agree upon the desirability of joint action, it was the intention of the U.S. A.E.C. to discuss the programme in detail with U.K. and Canadian officials.

I have now been asked to inform the U.S. A.E.C., through you, that the advisory Panel on Atomic Energy in Ottawa has agreed:

- (a) That we should cooperate with the United States and the United Kingdom in a programme of export controls upon a selected list of materials and machinery to the extent necessary for security purposes, and
- (b) that for this purpose Canadian officials would be authorized to enter into discussions with U.S. and U.K. officials.

I would assume that with this clearance through you your A.E.C. and our Atomic Energy Control Board could now arrange meetings to suit three-way convenience by direct correspondence.

I am sending a copy of this letter to Nicko Henderson.

Yours sincerely,

(Sgd.) T.A. STONE

R. Gordon Arneson, Esq.,
Office of the Under-Secretary,
Department of State,
Washington, D.C.

(C O P Y)

S E C R E T

DEPARTMENT OF EXTERNAL AFFAIRS

C A N A D A

Ottawa, September 23rd, 1948.

Dear Mr. Wrong:

I wish to refer to Mr. Stone's letter of May 20th, 1948, covering certain documents concerning parallel U.S.-U.K.-Canada Programme of Export Controls.

This matter, as you know, was considered by the Advisory Panel on Atomic Energy. The recommendations made by the Panel, which are set out in paragraph 7 of the minutes sent you on September 13th, 1948, have been approved by Mr. Howe and concurred in by Mr. St. Laurent and Mr. Pearson. It will therefore now be in order for you to advise the State Department that Canadian experts will be made available for detailed discussions with technical representatives of the United States and the United Kingdom on the basis indicated in the proceedings of the Advisory Panel.

Yours sincerely,

(Sgd.) Escott Reid.

Acting Under-Secretary of
State for External Affairs.

Hume Wrong, Esq.,
Canadian Ambassador to the United States,
Washington, D. C.

SECRET

(C O P Y)

Washington, D. C.,
May 20, 1948.

Dear Mr. Pearson:

Gullion handed me yesterday a letter and enclosures, copies of which I attach hereto, concerning a parallel U.S.-U.K.-Canada programme of export control on a selected list of materials and machinery which the U.S. Atomic Energy Commission consider should be covered by such a control. This matter arose rather suddenly the other day in view of Warren's journey to Germany to consult with General Clay and Gordon Munro's trip to England.

It has been decided that this should be a C.P.C. matter, and as I have told you in another letter it will be brought up at the next meeting in all probability. In the meantime, the State Department would be grateful to have our comments.

Yours sincerely,

(Sgd.) T.A. Stone.

L.B. Pearson, Esq.,
Under-Secretary of State
for External Affairs,
Ottawa, Canada.

(COPY)

SECRET

This document consists of 1 page
Copy No. 1 of 3 series A

DEPARTMENT OF STATE
WASHINGTON

May 19, 1948.

Dear Tom:

I attach copies of recent correspondence with Sir Gordon Munro, including a list prepared by the U. S. Atomic Energy Commission of items which they believed should be covered in a parallel U.S.-U.K.-Canada program of export control, to screen foreign orders for items of potential atomic energy application. I assume that you may want to bring these to the attention of the Canadian members of the Combined Policy Committee.

In addition to working out some coordination of U.S.-U.K.-Canadian controls, we should eventually consider extending the program to other countries in the Western community.

Mr. Frederick H. Warren, who is the Chief of the Production Facilities Control Branch of the Atomic Energy Commission, has left on a trip to Germany to consult with General Clay on the problem of controlling exports from the U.S. zone. He will arrive in Germany on May 18, 1948, and will remain for about a week. He will be ready to discuss the matter with the appropriate U.K. officials for the British zone, subject to General Clay's approval and British wishes. He will then return via the U.K. and will be in London from May 25 through May 27, 1948 to discuss with Roger Makins, and others, the existing British arrangements for control of items in this category and any impressions the British may have formed about the list suggested by us, which was taken to London by Sir Gordon Munro.

Sincerely yours,

(Sgd.) Edmund A. Gullion

Special Assistant to the Under Secretary

Enclosures:

- Copy 2B letter 5/7/48 to Sir Gordon Munro from
Mr. Gullion
- Copy 2B letter 5/7/48 to Mr. Gullion from
Mr. Warren, with enclosure.

The Honorable
Thomas A. Stone,
Canadian Minister,
Washington, D. C.

(COPY)

SECRET

This document consists of 1 page.
Copy No. 2 of 2 Series B

May 7, 1948.

Dear Gordon:

I attach a list prepared by the Atomic Energy Commission of the items which it believes ought to be under close export control. I enclose also a sheet giving the regulations under which it already controls some of these items. You will notice that there are some items in the list of May 7th which do not appear in the printed regulations. These items are of use in other applications beside those of atomic energy development. The Commission does not control these directly through its own licensing power but utilizes Department of Commerce controls, or else relies on a system of voluntary compliance.

As I explained to Donald Maclean, this is a first trial run on our part. I believe that it will give your colleagues some idea of the way the problem is approached in this country.

Sincerely yours,

(Sgd.) Edmund A. Gullion

Special Assistant to the Under Secretary.

Sir Gordon Munro,
British Treasury Delegation,
1800 K Street, N.W.,
Washington, D. C.

(C O P Y)

SECRET

This document consists of 1 pages
Copy No. 2 of 2 Series B.

UNITED STATES ATOMIC ENERGY COMMISSION

WASHINGTON, 25, D. C.

May 7, 1948.

Mr. Edmund A. Gullion
Special Assistant to the Undersecretary of State
Department of State
Washington 25, D. C.

Subject: Items for licensing control in United
Kingdom atomic energy program.

Dear Mr. Gullion:

Per your request of yesterday, there is transmitted herewith for conveyance to the British representatives, our proposed list of items which we believe should be reflected immediately in a parallel program of export control.

We assume of course, that the British control system like ours, would be sufficiently flexible to permit the addition by administrative authority, of other items which may be judged of sufficient importance to come under this same control.

Very truly yours,

(Sgd.) Frederick H. Warren

Chief, Production Facilities
Control Branch

Attachment (Unclassified)

(C O P Y)

May 7, 1948.

COMMENTS ON ATTACHED LETTER OF ITEMS RECOMMENDED FOR
LICENSING IN CONNECTION WITH ATOMIC ENERGY WORK

1. The attached list is not all inclusive but is considered to cover the most important items which should be represented in a program of export licensing for maintenance of security in atomic energy work.

2. Such licensing does not contemplate complete embargo, but instead, careful administration to prevent misuse and improper distribution.

3. Several items on the list will clearly require competent technical advice for determination of the items to be controlled and the degree of control.

(C O P Y)

May 7, 1948.

LIST OF ITEMS SUGGESTED FOR UNITED KINGDOM CONTROL
IN CONNECTION WITH ATOMIC ENERGY PROGRAM

Materials

1. Uranium metal, thorium metal; metals and alloys containing uranium and thorium.
2. Uranium compounds including the following:
 - a. Uranium (or Uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium Dioxide (thoria)
4. Thoriated tungsten wire
5. Incandescent gas mantles
6. Monazite sand or other thorium containing ores
7. Carnotite, pitchblende or other uranium containing ores
8. Actinium bearing salts and compounds
9. Beryllium metal
10. Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
11. Fluorocarbons
12. High purity graphite
13. Powdered nickel and special nickel fabrications
14. Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump; include silicone diffusion pump fluids)
15. Especially pure refractories for exceptionally high temperatures (such as beryllia, zircon and others)
16. Insulators of exceptionally high dielectric strength at elevated temperatures (such as high zircon and high alumina content)
17. Unusual metals and chemicals, especially when of exceptionally high purity including rare earths.

Facilities/

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material)
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., an electro-magnetic or gaseous diffusion process
 - c. Electronuclear machines
 - 1) Cyclotrons
 - 2) Betatrons
 - 3) Synchrotrons
 - 4) Synchro-cyclotrons
 - 5) Van de Graaf machines (electrostatic generators)
 - 6) Linear accelerators
2. Class II Facilities
 - a. Radiation detection instruments and their components
 - 1) Geiger Mueller, proportional or parallel plate counter scalars.
 - 2) Geiger Mueller or proportional counter rate meters.
 - 3) Scalars, all types adaptable to radiation detection.
 - 4) Geiger Mueller, proportional audio, or mechanical detectors.
 - 5) Integrating ionization chamber meters and ionization chamber rate meters.
 - 6) Geiger Mueller, proportional, or parallel plate counter detector components.
 - 7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere.
 - 8) Counter pulse rate meters.
 - 9) High gain, high impedance linear pulse amplifiers.
 - 10) Geiger Mueller quenching units.
 - 11) Geiger Mueller or proportional coincidence units.
 - 12) Electroscopes and electrometers, pocket and survey types, including dosimeters.
 - 13) Chambers, pocket type, with electrometer charger-reader.
 - 14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere.
 - 15) Resistors, values above 1,000 megohms.
 - b. Mass spectrometers and mass spectrographs including components.
 - 1) Ion sources, mass spectrometer or spectrograph types.
 - 2) Acceleration and focusing tubes.
 - 3) Ionization chamber.
 - 4) Micromicroammeters.
 - 5) Electrometer type tubes as above.
 - 6) Resistors, values over 1,000 megohms.
 - c. Leak detectors, mass spectrometer type.
 - d. Vacuum/

- 3 -

- d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet)
- e. Vacuum metal melting furnaces.
- f. Magnetic separators for ores.
- g. High precision laboratory instruments.

EXTERNAL AFFAIRS SECRET FILE
201-AC(5)
Sub 29 Chron 1

Top Secret

Mr. Bodine
To see on return

Ottawa, November 17, 1948.

Dear Mr. Wrong:-

I should like to refer to Mr. A. L. Wright's letter to you of November 12, 1948, concerning a parallel U.S.-U.K.-Canadian program of export controls of atomic materials, and to enclose for your information a copy of a self-explanatory letter of November 16, addressed to Mr. Ignatieff by Mr. Jarvis of the Atomic Energy Control Board, together with copies of the letter and the list mentioned therein.

Yours sincerely,

G. IGNATIEFF

for Acting Under-Secretary of State
for External Affairs.

H. H. Wrong, Esquire,
Ambassador of Canada in the United States
1746 Massachusetts Avenue,
WASHINGTON, D.C.

cc. to-Mr. A.D.P. Heeney
-Mr. G. M. Jarvis

13-c1

330/7/6/1

CONFIDENTIAL

. 20..10.48

Final List of Items to be submitted to Board of Trade
for imposition of Export Control.

- 1 Heavy water, being water containing more than 10% deuterium oxide.
- 2 Beryllium metal in unmanufactured form, including beryllium powder.
- 3 Beryllium ores and concentrates
- 4 Cyclotrons and instruments of similar nature.
- 5 Voltage generators to produce D.C. voltages greater than one million volts, and designed to be capable of accelerating charged particles.
- 6 Betatrons.
- 7 Synchrotrons.
- 8 Linear accelerators to produce particles of energies greater than one million electron volts.
- 9 Equipment for health monitoring against radiation hazards, excluding photographic film and equipment containing it.
- 10 Ionization measuring equipment suitable for the radiation survey of terrain and plant sites.
- 11 Electro-magnetic ion separators, including mass spectrographs and mass spectrometers for any purpose, including leak detection
- 12 Vacuum diffusion pumps of which the diameter measured inside the barrel at the inlet jet is 12 inches or more.
- 13 Positive-ion sources, suitable for use in cyclotrons, mass spectrometers and the like.
- 14 Centrifuges with a peripheral speed exceeding 1,000 ft./sec.
- 15 Geiger-Müller counter tubes.
- 16 Ionization chambers.
- 17 Scintillation counters.
- 18 Neutron-counters containing boron, boron trifluoride, or hydrogen.
- 19 Pocket and laboratory electroscopes.
- 20 Scaling Units and rate meters, suitable for use in radiation detection.
- 21 High gain stable linear pulse amplifiers, designed to operate within the range 50 c/s to 10 Mc/s, and of input resistances not less than 10 megohms.
- 22 Instruments capable of measuring a current of less than 1 micro micro ampere.
- 23 Electrometer valves designed to handle input currents less than 1 micro micro ampere and instruments embodying them.
- 24 Resistors of resistance not less than 10^{10} ohms, and instruments embodying them.

- 25 Vacuum furnaces designed to operate at pressures lower than 0.1 mm Hg and at temperatures higher than 1100°C.
- 26 A.C. and D.C. magnets suitable for items 4, 6 and 7.

Exceptions.

It is desired to exclude from the control under items 9, 16, 22, 23 and 24 radiation measuring equipment associated with X-ray machines. The following item is therefore to be included in the Exemption Schedule of the Control Order:

Radiation measuring equipment and components forming an integral part of X-ray machines designed to operate at voltages under 500 Kv.

At. En.S.(a)
M.O.S. Shell Mex House.

A.E. 849



cc. to Mr. Harvey
Date
Nov 16/48
asab

EXTERNAL DOCUMENT
SECRET FILE
201-AC(S)
Sub. 29. Chron.

M. CADIEUX/MAB
FILE COPY

~~TOP SECRET~~

OTTAWA, November 16th, 1948.

Dear Mr. Jarvis,

I would refer to our previous correspondence concerning the proposed U.K.-U.S.-Canada parallel programme of export control of atomic materials. In this connection, I enclose a copy of a letter just received by the Canadian Embassy in Washington in reply to Mr. Stone's letter of October 2nd.

Mr. Arneson has verbally suggested that a preliminary conference to discuss the extent of the control problem might be held within the next month. He is contacting the local parties involved prior to recommending a specific date.

Yours sincerely,

G. IGNATIEFF

for Acting Under-Secretary of State for External Affairs

G.M. Jarvis, Esq.,
Secretary,
Atomic Energy Control Board,
No. 7 Building, Sussex St.,
OTTAWA

COPY FOR MR. IGNATIEFF

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub 29... Chron 29...

M. CADIEUX/MAB
November 16th, 1948.
SECRET

MEMORANDUM FOR MR. HEENEY

I had another talk with Mr. Jarvis who said that he had spoken to Wells in Washington. Apparently Wright has been in touch with Customs and Export officials in Washington and has prepared a new list of materials to be controlled. The list is to be referred to the Embassy early this week. Mr. Jarvis also mentioned to Mr. Wells the possibility of having an informal meeting. Wells thinks that this is a good idea and a date will be determined once the matter has been cleared with Dr. Mackenzie who will be returning to Ottawa this week. In addition to the proposed programme of export controls, Mr. Jarvis has to discuss other matters arising out of the meeting which was held a few weeks ago in Ottawa.

M. Cadieux

COPY FOR MR. IGNATIEFF

EXTERNAL AFFAIRS
SECRET FILE
201-AC (S)
Sub 2.7 Chron 2.9

M. CADIEUX/MAB
November 16th, 1948.
SECRET

MEMORANDUM FOR MR. HEENEY

I had a call from Mr. Jarvis concerning the proposed U.K.-U.S.-Canada parallel export control of radio-active substances. Mr. Jarvis said that he had discussed with various officials in Customs and Trade and Commerce the memorandum which he had prepared for the Advisory Panel. He said that these officials had no particular comments to offer and they had no suggestions to make as to procedure.

2. Mr. Jarvis is now considering the advisability of communicating with his opposite number in Washington, Mr. Wells, and asking him to have talks with Customs and Trade officials in Washington so that they can work out a scheme of the various materials which would have to be handled through the regular export and customs channels, and list the other materials which would have to be handled less formally through contacts with the manufacturers.

3. Mr. Jarvis is aware that the position now is that the State Department submitted certain proposals to us, through the Embassy in Washington, for a joint programme of export controls. The matter was considered in the Panel and the Government gave its approval in principle to discussions in this regard with the United States and United Kingdom officials. The Embassy in Washington has notified the State Department accordingly. As the initiative originated in the State Department and the State Department has now had our views, the next move is up to them. I agree, however, with Mr. Jarvis that I can see no objections to his having informal and confidential talks with his opposite number as to what might appropriately be done should it be desired eventually to establish such a system of control. Mr. Jarvis proposes to get in touch with Mr. Wells at the beginning of next week, and if Wells is prepared to discuss the matter, Mr. Jarvis may go to Washington for this purpose.

M. Cadieux



ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

SECRET FILE
201-AC(S)
Sub. <u>29</u> Chron

PLEASE REFER TO FILE 13-C1
10-5
23-1

CONFIDENTIAL

BY HAND

717
6002

16 November 1948

G. Ignatieff, Esq.,
Acting Under-Secretary of State
for External Affairs,
O T T A W A

Dear Mr. Ignatieff:

I enclose herewith copy of letter dated the 9th instant from Mr. A.K. Longair of the United Kingdom Scientific Mission, Washington, together with copy of the list therein mentioned. These were sent to me through a U.K. representative at Chalk River and reached me only this morning. I do not know to what extent this represents the result of discussions between U.K. and U.S. representatives but understand that some communication from the State Department on the subject was to have been sent to the Canadian Ambassador at Washington within the last few days.

Yours faithfully,

G. M. Jarvis,
Secretary.

GMJ:r

Enc.

C O P Y

A Unit of
BRITISH COMMONWEALTH SCIENTIFIC OFFICE

United Kingdom Scientific
Mission
1785 Massachusetts Avenue N. W.
Washington 6, D.C.

File No:

November 9, 1948.

187-69-3

CONFIDENTIAL

Mr. G.M. Jarvis,
Canadian Atomic Energy Control Board,
3 Temporary Building, Ottawa.

Dear Mr. Jarvis:

I enclose two copies of the final list of items which the Department of Atomic Energy in Great Britain has submitted to the Board of Trade there for the imposition of export control. I am sorry that I am not in a position to say whether the Board of Trade has yet issued the relevant order but I can say that it is very likely that no specific mention will be made of atomic energy and that the items will appear mixed up with lots of other items.

I am asked at the same time to say that the Department of Atomic Energy in Great Britain is ready to keep in close touch with the Canadian Atomic Energy Control Board and with the Atomic Energy Commission of the United States in arriving at decisions on doubtful cases.

Yours sincerely,

(signed) A.K. Longair.

AKL/bh
Encs.

c.c. Mr. Donald Watson

EXTERNAL AFFAIRS
SECRET FILE
201-AC(6)
Sub. 29... Chron 29...

M. CADIEUX/MAB
November 16th, 1948.
TOP SECRET

MEMORANDUM FOR MR. IGNATIEFF

I attach for your signature, if you concur:

- (a) a letter to Mr. Jarvis transmitting him a copy of the list of materials to be included in the proposed export control programme of atomic energy materials. This list has been prepared by the U.S. Atomic Energy Commission;
- (b) a memorandum to Mr. Heeney referring a copy of our letter to Mr. Jarvis and a copy of the U.S. Atomic Energy Commission list.

M. Cadieux
M. Cadieux *M. O. B.*

EXTERNAL AFFAIRS
SECRET FILE
201-ACC(S)
Subj: Chron 29
HEENEY

M. CADIEUX/MAB
November 16th, 1948.
SECRET

File/rel

MEMORANDUM FOR MR. HEENEY

I had a call from Mr. Jarvis concerning the proposed U.K.-U.S.-Canada parallel export control of radio-active substances. Mr. Jarvis said that he had discussed with various officials in Customs and Trade and Commerce the memorandum which he had prepared for the Advisory Panel. He said that these officials had no particular comments to offer and they had no suggestions to make as to procedure.

2. Mr. Jarvis is now considering the advisability of communicating with his opposite number in Washington, Mr. Wells, and asking him to have talks with Customs and Trade officials in Washington so that they can work out a scheme of the various materials which would have to be handled through the regular export and customs channels, and list the other materials which would have to be handled less formally through contacts with the manufacturers.

3. Mr. Jarvis is aware that the position now is that the State Department submitted certain proposals to us, through the Embassy in Washington, for a joint programme of export controls. The matter was considered in the Panel and the Government gave its approval in principle to discussions in this regard with the United States and United Kingdom officials. The Embassy in Washington has notified the State Department accordingly. As the initiative originated in the State Department and the State Department has now had our views, the next move is up to them. I agree, however, with Mr. Jarvis that I can see no objections to his having informal and confidential talks with his opposite number as to what might appropriately be done should it be desired eventually to establish such a system of control. Mr. Jarvis proposes to get in touch with Mr. Wells at the beginning of next week, and if Wells is prepared to discuss the matter, Mr. Jarvis may go to Washington for this purpose.

I agree

Why should he go for this purpose into U.S. mnu?

M. Cadieux per W.C.B.
M. Cadieux

EXTERNAL AFFAIRS SECRET FILE
201 (01)
Sub. 29... Chron. 29....

M. CADIEUX/MAB
November 16th, 1948.
SECRET

MEMORANDUM FOR MR. HEENEY

I had another talk with Mr. Jarvis who said that he had spoken to Wells in Washington. Apparently Wright has been in touch with Customs and Export officials in Washington and has prepared a new list of materials to be controlled. The list is to be referred to the Embassy early this week. Mr. Jarvis also mentioned to Mr. Wells the possibility of having an informal meeting. Wells thinks that this is a good idea and a date will be determined once the matter has been cleared with Dr. Mackenzie who will be returning to Ottawa this week. In addition to the proposed programme of export controls, Mr. Jarvis has to discuss other matters arising out of the meeting which was held a few weeks ago in Ottawa.

I did say OK

Decided he is going to Washington anyway

M. Cadieux
M. Cadieux per N.A.B.

Dr.

SECRET

2/1/48

Ottawa, November 15th, 1948.

H.H. Wrong, Esq.,
Canadian Ambassador to the United States,
Washington, D.C.

Dear Mr. Wrong:

I wish to refer to Mr. Stone's secret letter to me of October 9th, 1948, and to another letter received from your office on November 10th concerning the establishment of a procedure as regards the supply of uranium rods. Mr. Stone's letter of October 9th stated in the last paragraph that if I had different views I was to write to you. As the scheme outlined in Mr. Stone's letter seemed satisfactory to me, this is the reason why no further word was sent.

I have examined the procedure outlined in Mr. Stone's letter and various documents referred to therein, and I see no objection to it from the Canadian point of view.

Yours sincerely,

A.D.P. Heeney,
Chairman, Advisory Panel
on Atomic Energy.

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub 29 Chron 29...



EXT. AFFAIRS
SECRET FILE
201-AC(S)
Sub. 29 Chron. ✓
TOP SECRET.

Washington 6, D. C.,
November 12th, 1948.

Dear Mr. Ignatieff:

This office would refer to your letter dated 30th October to the Canadian Ambassador in respect of the establishment of a parallel U.S.-U.K.- Canadian program of export controls of atomic material.

I have had occasion to discuss this matter personally with Messrs. Arneson and Wendel at the State Department and am enclosing copy of a letter just received in reply to Mr. Stone's letter of 2nd October. The U.S. view is, it is thought, fairly well expressed.

Mr. Arneson has verbally suggested that a preliminary conference to discuss the extent of the control problem might be held within the next month and is contacting the local parties involved prior to recommending a specific date.

Your further views in this matter would be most welcome.

Yours sincerely,

George Ignatieff, Esq.,
Department of External Affairs,
Ottawa, Canada.

SECRET

DEPARTMENT OF STATE

Washington

November 9, 1948

S E C R E T

Dear Mr. Wright:

In accordance with Mr. Stone's note of October 8 to Mr. Wendel I am addressing this reply to Mr. Stone's letter of October 2 to you.

Since the date of Mr. Gullion's letter of May 19, 1948, there have been several developments concerning export controls in which you will be interested. On June 3 Mr. Frederick H. Warren, then Chief of the Production Facilities Control Branch of the Atomic Energy Commission, transmitted to Colonel Curtis Nelson a detailed list of items suggested for inclusion in a parallel control scheme. This list was more inclusive than that accompanying Mr. Gullion's letter of May 19 and, in addition, designated the respective groups of items falling under the several control mechanisms employed by this Government. I am attaching for your information a copy of this list with certain amendments.

Another development in which you will be interested is the move taken by this Government in August to initiate discussions with several European Governments looking toward the establishment of controls over atomic energy materials similar to those practiced by the United States to the end that shipment of these materials to Soviet dominated countries would be blocked. During Congressional consideration of the Economic Cooperation Act of 1948 and during the initial phases of administrative interpretation of that Act by the organization established to implement it, the Department of State took the position that all atomic matters affecting ECA countries should be handled separately by the Department in cooperation with the Atomic Energy Commission. This view has been accepted by all concerned.

Mr. A.L. Wright,
Attache, Canadian Embassy.

SECRET

SECRET

- 2 -

It has meant, however, that the Department has been obliged to move with some despatch to explore the possibility of securing the cooperation of ECA countries in exercising controls over the export of atomic energy materials and equipment.

To this end preliminary conversations have been initiated with the appropriate officials in the governments of the following countries: Sweden, Norway, The Netherlands, Belgium, Italy, and Switzerland, to ascertain (1) the extent to which the subject materials are produced or are capable of being produced in each country, (2) whether any significant orders to Eastern Europe are now pending, (3) what supervision or controls, either official or unofficial, are now exercised over export of such items, and (4) whether it might be desirable to offer technical assistance of the AEC to delineate specifically the items of importance in this field. Replies have now been obtained from the governments of Sweden and Norway which give satisfactory assurances that no shipment of significant atomic energy equipment or materials is being made or will be made in the near future to Soviet dominated areas from these countries. We are hopeful that similar assurances will be forthcoming from the other countries concerned.

Included in the instructions sent to our missions in Europe were two lists of material and equipment for which similar controls were sought. These lists are attached. List A enumerates the items requiring AEC export licenses in accordance with published regulations issued by the AEC. List B contains those items controlled by AEC through governmental liaison with the Office of International Trade of the Department of Commerce, supplemented by voluntary manufacturer compliance. List B as transmitted is not as inclusive as the list sent Colonel Nelson by Mr. Warren because it was considered unnecessary and undesirable from a security point of view to include certain items which it was believed could not be produced in continental European countries. Since knowledge of the contents of List B would probably be of considerable interest to the Soviets, our missions have been instructed to handle inquiries on these items with caution.

SECRET 000187

SECRET

- 3 -

Preliminary to such three-way technical discussions as may be desirable, I feel it would be useful to have your reactions to the program indicated above and to learn what steps your Government, on its part, has taken in this matter.

I am sending a copy of this letter and enclosures to Nicko Henderson.

Sincerely yours,

Signed: R. Gordon Arneson
Special Assistant to the Under Secretary

Enclosures:

List of Commodities under Export Control
of OIT, authorized by AEC
Suggested Items
Proposed Categories
List A
List B

SECRET

CONFIDENTIAL

LIST OF COMMODITIES UNDER EXPORT CONTROL OF OFFICE OF
INTERNATIONAL TRADE, DEPARTMENT OF COMMERCE, AUTHORIZED
BY AEC

Dept. of Commerce
Schedule B No.

Commodity

770810	Mechanical (Dry) Vacuum Pumps: With a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
770670	Diffusion Vacuum Pumps: 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
775000	Parts for mechanical (dry) vacuum pumps with a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
775098	Parts for diffusion vacuum pumps, 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
829960	Chemical Specialties: Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump) (include silicone diffusion pump fluids)
707410	Induction furnaces, vacuum metal-melting only, and component parts therefor.
663900	Thoriated tungsten wire
664905	Beryllium metal
664910	Bismuth metals and alloys
664950	Radium metal (radium content)

CONFIDENTIAL

- 2 -

664996	Callium metal
664998	Polonium metal
815590	Radium salts and compounds for medical use
815590	Radon (radium emanations)
813590	Chemicals containing artificial radio- active isotopes
839900	Actinium bearing salts and compounds
839900	Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
839900	Chemicals containing artificial radio-active isotopes
839900	Callium salts and compounds
839900	Polonium bearing salts and compounds
839800	Radium ore concentrates
839800	Radium salts and compounds (radium content)
843800	Paints containing radium

CONFIDENTIAL

- 3 -

SUGGESTED ITEMS FOR HANDLING
BY INDUSTRY LIAISON

Fluorocarbons

High purity graphite

Powdered nickel and special nickel fabrications

Especially pure refractories for exceptionally high
temperatures (such as beryllia, sircon and others)

Insulators of exceptionally high dielectric strength
at elevated temperatures (such as high zircon and
high alumina content)

Unusual metals and chemicals, especially when of
exceptionally high purity including rare earths

High precision laboratory instruments

Potentiometers
Resistance Bridges
Spectrophotometers
Microphotometers
Spectrographs
Oscillographs
Galvanometers

Magnetic separators for ores

Electronic devices for controlling and/or recording
flow in industrial processes

High voltage Power Tubes

Vacuum gauges (ionization type)

CONFIDENTIAL

PROPOSED CATEGORIES OF INSTRUMENTS FOR LICENSING
 (As listed in Schedule B(a))

<u>Conventional</u> (Info. only)	<u>Restricted Flow</u> (Based on quantity)	<u>Critical</u> (in any quantity)
	(i) G-M scalers	(i) Parallel plate counter scalers
	(ii) G-M counter rate meters	Proportional counter scalers
	(iii) Scalers	(ii) Proportional counter rate meters
	(iv) G-M audio or mechanical detectors	(iv) Proportional audio or mechanical detectors
(v) Integrating ionization chamber meter	(v) Ionization chamber rate meter	(vi) Proportional or parallel plate counter detector components
(vi) G-M counter tubes	(vii) Micromicroammeters	
	(viii) Counter pulse rate meters	
	(ix) High gain high impedance linear pulse amplifier	
(x) G-M-quenching units		
(xi) G-M or proportional coincidence units		
(xii) Electroscopes and electrometers, pocket and survey types, including dosimeters		(xii) Electrometers, Vibrating Reed

CONFIDENTIAL

CONFIDENTIAL

Proposed Categories, Cont'd.

- 2 -

<u>Conventional</u> <u>(Info. only)</u>	<u>Restricted Flow</u> <u>(Based on quantity)</u>	<u>Critical</u> <u>In any quantity</u>
(xiii) Chambers, pocket type, with electrometer charger-reader		
(xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micromicroamperes, such as FR-54, RE-507, CK-570AX, VX-32, and VX-41, and equivalent	(xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micro- microamperes, such as FR-54, RE-507, CK-570AX, VX-32, and VX-41, and equivalent	
(xv) Resistors, values above 1,000 megohms		

CONFIDENTIAL

LIST A

Materials

1. Uranium metal, thorium metal, metals and alloys containing uranium and thorium.
2. Uranium compounds, including the following:
 - a. Uranium (or uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium dioxide (thoria)
4. Monazite sand or other thorium containing ores
5. Carnotite, pitchblende or other uranium containing ores

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material).
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., and electromagnetic or gaseous diffusion process
 - c. Electronuclear machines
 - (1) Cyclotrons
 - (2) Betatrons
 - (3) Synchrotrons
 - (4) Synchro-cyclotrons
 - (5) Van de Graaff machine (electrostatic generators)
 - (6) Linear accelerators
2. Class II Facilities
 - a. Radiation detection instruments and their components
 - (1) Geiger Mueller, proportional or parallel plate counter scalers

- 2 -

- (2) Geiger Mueller or proportional counter rate meters
 - (3) Scalers, all types adaptable to radiation detection
 - (4) Geiger Mueller, proportional audio, or mechanical detectors
 - (5) Integrating ionization chamber meters and ionization chamber rate meters
 - (6) Geiger Mueller, proportional, or parallel plate counter detector components
 - (7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere
 - (8) Counter pulse rate meters
 - (9) High gain, high impedance linear pulse amplifiers
 - (10) Geiger Mueller quenching units
 - (11) Geiger Mueller or proportional coincidence units
 - (12) Electrosopes and electrometers, pocket and survey types, including dosimeters
 - (13) Chambers, pocket type, with electrometer charger-reader
 - (14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere
 - (15) Resistors, values above 1,000 megohms
- b. Mass spectrometers and mass spectrographs including components
- (1) Ion sources, mass spectrometer or spectrograph types
 - (2) Acceleration and focusing tubes
 - (3) Ionization chambers
 - (4) Micromicroammeters
 - (5) Electrometer type tubes as above
 - (6) Resistors, values over 1,000 megohms
- c. Leak detectors, mass spectrometer type
- d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet)

LIST B

Materials

1. Beryl, Beryllium metal, beryllium alloys, beryllium oxides and other beryllium compounds, in all forms, except fabricated alloys.
2. Elemental fluorine, fluorocarbons and fluorine compounds, except hydrofluoric acid and fluorspar.
3. Zirconium oxide in all forms.
4. Graphite, artificial (excluding integral parts of equipment).
5. Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump; including silicone diffusion pump fluids)
6. The following metals and their compounds: germanium, indium, rhenium, rhodium. Also cerium (except in lighter flints and abrasives), lanthanum, and all other rare earths.
7. Heavy water. (Applicable to Norway and Italy only).

Equipment

1. Mechanical (dry) vacuum pumps, with capacities of 20 cfm or more and capable of producing a vacuum of 1 mm of mercury pressure.
2. Diffusion vacuum pumps, mercury and oil types, 5" to 12" in diameter at inlet jet.
3. Induction furnaces for melting metals under vacuum.
4. The following high precision laboratory instruments:
 - Spectrophotometers
 - Microphotometers
 - Spectrometer, optical
 - Galvanometers (except student types)

- 2 -

5. Vacuum gauges (ionization type)
6. Valves, bellows type, except as integral parts of equipment.
7. Stainless steel pumps.
8. Centrifuges, stainless steel industrial process type.
9. Glass working lathes
10. Insulators of especially high dielectric strength at elevated temperatures (such as high zirconia and high alumina content).
11. Electrolytic cells for the production of fluorine.
12. Especially pure refractory materials for exceptionally high temperatures, including fabricated forms. (Such as beryllia, zirconia, and alumina.)

copy
12 Nov 48.
nn.

copy to Mr. Jarvis ✓

*Oct 30/48
deab*

EXTERNAL AFFAIRS SECRET FILE
201-AC(S)
Sub. 29. Chron 29...

M. CADIEUX/MAB
FILE COPY

TOP SECRET

OTTAWA, October 30th, 1948.

Dear Mr. Wrong,

I wish to refer to Mr. Stone's letter to Mr. Reid of October 2nd, 1948, and to previous correspondence concerning parallel U.S.-U.K.-Canada programme of export controls. I should be glad to learn whether any answer from the State Department has been received to Mr. Stone's letter to Mr. Gordon Arneson of October 2nd, 1948. Apparently Mr. Wells of the Atomic Energy Commission has communicated informally with Mr. Jarvis of the Atomic Energy Control Board here suggesting that informal preliminary talks might take place between a representative of the Commission, the United Kingdom and a representative of the Atomic Energy Control Board in Ottawa. Before going any further I should be interested in knowing whether a corresponding action has been taken by the State Department. As you know, we have not taken the initiative in this matter and our position is that if the U.S. authorities wish to discuss a parallel programme of export controls, Canadian officials have been authorized to take part in these discussions.

Yours sincerely,

G. Spatiff

for Acting Under-Secretary of State
for External Affairs

H.H. Wrong, Esq.,
Canadian Ambassador to the
United States,
WASHINGTON, D.C.

M. Carleton/FMC

EXTERNAL AFFAIRS
SECRET FILE
201-AC(S)
Sub. 29 Chron. 29

TOP SECRET

October 28th, 1948.

MEMORANDUM FOR MR. IGNATIEFF:

I attach, for your signature, a letter to Mr. Stone in Washington concerning previous correspondence as regards parallel U.S.-U.K.-Canada programme of export controls (file attached).

2. Mr. Heeney has seen this letter and concurs. He suggests that we should send it to the Ambassador rather than Mr. Stone. The last time we corresponded with the Embassy in Washington the letter had been drafted first to Mr. Stone but then, at Mr. Heeney's suggestion, it was addressed to Mr. Wrong. The answer however came from Mr. Stone. (See his letter of October 2nd on file) It seems to me that, under the circumstances, we might send this letter to Mr. Stone rather than to Mr. Wrong as the former seems to be conducting the correspondence on the subject.

*Mr Stone is in Paris in City
in a radio conference
reports for them from weeks
I think they should have sent
to me by way
M. Carleton*

Personnel Officer.

EXTERNAL AFFAIRS	M. CADIEUX/MAB
SECRET FILE	October 25th, 1948
	<u>TOP SECRET</u>
201-AC(S)	
Sub. 29..Chron. 29....	

Ans
MEMORANDUM FOR MR. HEENEY

... The attached letter to Mr. Stone in Washington is the result of a conversation with Mr. Jarvis who said that Mr. Wells of the Atomic Energy Commission in Washington had been in touch with him and had raised with him the question of preliminary talks along the lines indicated in the letter. Mr. Jarvis said that he was not quite ready to discuss these matters as he has not yet completed his discussions with the customs officials here who will be involved in any programme of export controls. Mr. Jarvis does not want the Embassy to do any prodding but he thought it would be interesting to know whether the State Department had sent any answer to Mr. Stone's letter of October 2nd. If you concur in the attached letter I propose to submit it to Mr. Reid for signature.

M. Cadieux
M. Cadieux

*OK but I will address
to Ambassador
Ans*

MEMORANDUM

Privy Council Office

TOP SECRET

Ottawa... Oct. ... 19, ... 1948.

Mr. ~~Levesque~~ Lavoie to note

~~Mr. Lavoie~~

Copy for Mr. ~~Escott~~ Reid.

~~MR~~

~~Dr.~~

A. D. P. H.

EXTERNAL AFFAIRS
SECRET FILE

~~TOP SECRET~~

201-AC(S)

Sub... 29, Chron 29...

Ottawa, October 19th, 1948.

The Right Honourable C. D. Howe, M.P.,
Minister of Trade and Commerce,
Ottawa, Ontario.

Dear Mr. Howe:

This is to acknowledge your memorandum of October 16th referring to the report of the Advisory Panel on Atomic Energy and approving the Panel's recommendations on the proposed export controls programme.

On the earlier indication received from you and from Mr. St. Laurent our Embassy in Washington had already been informed that the Canadian government would be prepared to co-operate in a joint programme on the basis recommended in the Panel's minutes of September 8th, para. 7. Technical representatives of the three governments are to discuss the lists of items to be covered.

I also wish to acknowledge return of the Combined Policy Committee agenda for the meeting of July 7th last, and the papers attached thereto.

Yours sincerely,

A. D. P. Heeney
Chairman, Advisory Panel
on Atomic Energy.

19.10.15 (us)

000202

MINISTER OF TRADE AND COMMERCE

COPY

Ottawa, October 16th, 1948.

TOP SECRET

MEMORANDUM:

To - Mr. A. D. P. Heeney,
Chairman, Advisory Panel on
Atomic Energy

From - C. D. Howe.

I have your letter of September 13th, enclosing copy of Minutes of the meeting of your Panel, giving special attention to the matter of joint export controls, atomic energy problems before the UN, and report from the C.P.C., re South Africa and Belgium.

I am glad to approve the recommendations on the proposed export controls programme, as set out in Paragraph 7 of the Panel Minutes. You may inform Washington accordingly.

Thanks for keeping me posted in these matters.

(Sgd) C. D. Howe

SECRET

EXTERNAL AFFAIRS SECRET FILE
201-AC(5)
Sub 29 Chron 29

O T T A W A,
October 12th, 1948.

Dear Mr. Wrong:

7 OCT. 48

The attached letter from the Secretary of the Atomic Energy Commission is self-explanatory. With it I am sending you herewith one copy of the enclosure referred to.

....

Yours truly,

J. Speer

J
Acting Under-Secretary of State
for External Affairs

H. H. Wrong, Esq.,
Ambassador,
Canadian Embassy,
WASHINGTON, D.C.

CANADIAN EMBASSY

EXTERNAL AFFAIRS
SECRET FILE

SECRET

Washington, D.C.
October 9, 1948.

201-AC(8)
Sub. 29 Chron 29

Dear Arnold:

I enclose a copy of a letter which I have received from Wells of the Atomic Energy Commission with which came a copy of a letter from K.F. Tupper to Colonel Nelson, U.S. Liaison Officer at Chalk River, concerning orders for uranium rods.

Before writing me this letter Wells telephoned and we discussed the matter. We decided that since Chalk River supplies of uranium were now to be provided under the allocations scheme laid down by the C.P.C. at its meeting of January 7th last, this should at least be of record in the C.P.C. For this reason Wells has written me this letter and sent copies, as you will see, to Arneson in the State Department.

You will notice that this procedure will not in any way affect the date of delivery of the material as the required action on the United States side has already begun. Wells and I thought, however, and Hume agrees, that under the present allocations scheme it would be well if we at this Embassy and the State Department should have records of supplies in view of the fact that Canadian requirements will be reviewed by the C.P.C. from time to time when the whole supply position is considered under the allocations scheme.

If you have any different views on this Hume would be glad to hear from you.

Yours ever,

TOMMY

A.D.P. Heeney, Esq.,
Secretary of the Cabinet,
O t t a w a, Canada.

COPY/MAB

SECRET

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON

EXTENSION
SECRET FILE

201-AC(S)
Sub... 29..Chron 29...

October 6, 1948.

Mr. Thomas A. Stone,
Minister, Canadian Embassy,
1746 Massachusetts Avenue, N.W.
Washington, D.C.

Dear Mr. Stone,

Following up my telephone conversation with you last Friday, I am setting forth the information which we discussed at that time. The National Research Council has informed Mr. Nelson that 250 uranium rods are needed for the operation of the NRX Reactor and purchase orders have been placed with the Mallinckrodt Chemical Company of St. Louis for the production of the metal and with the Joslyn Manufacturing Company of Fort Wayne for the fabrication, delivery to be made in about six months.

For your information I am enclosing a copy of a letter from Mr. Tupper to Mr. Nelson dated September 29, 1948.

As I mentioned to you on the telephone, the required action on our side will be begun, but as this is a matter which relates to the action taken by the Combined Policy Committee on January 7 of this year, you may wish in the meanwhile to formalize this matter of requirements and supply for purposes of the C.P.C. records.

I am sending a copy of this letter to Mr. R. Gordon Arneson.

Sincerely yours,

A. A. Wells

Enclosure
Cy./1, Series B, ltr.
KFTupper to CANelson, 9/29/48

SECRET

Engineering Division

29 September, 1948.

Colonel C.A. Nelson,
U.S. Liaison Officer,
Chalk River, Ontario.

Dear Colonel Nelson:

This will confirm the request made to you by the Chalk River Pile Operating Committee for the assistance of the U.S.A.E.C. in purchasing 250 additional uranium rods for use in the Chalk River Reactor.

We have forwarded purchase orders to the Mallinckrodt Chemical Company of St. Louis and the Joslyn Manufacturing Company of Fort Wayne, Indiana, as was done for two similar purchases including 220 rods which were delivered to us in 1945 and 165 rods in May 1947, with the assistance of Manhattan District and the U.S.A.E.C. respectively.

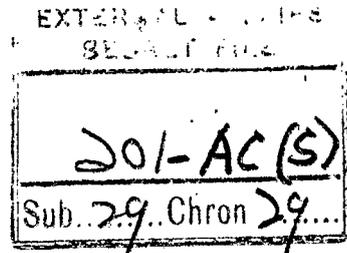
The present rate of removal of irradiated rods from the reactor requires that we have available 250 fully fabricated and sheathed rods by October 1949. This amounts to 30,000 lbs. of uranium. Since about six months has been required for production of metal and fabrication of rods and about the same length of time for sheathing and assembling, it is clear that we must proceed with the purchase.

The assistance of the U.S.A.E.C. in preparing proper specifications and in arranging clearance for export will be greatly appreciated.

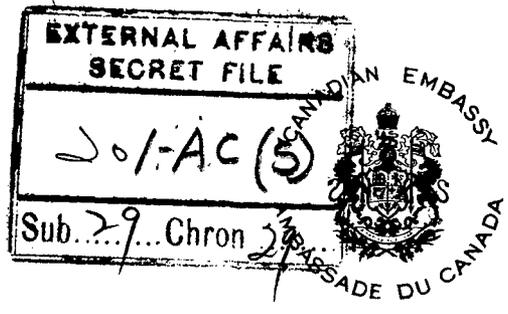
Yours very truly,

/s/ K.F. Tupper

K.F. Tupper,
Director,
Engineering Division
Atomic Energy Project.



*Mr. Reid
Doubt 8/48
Mark
File*



SECRET

Washington, D.C.,

October 2, 1948.

Dear Mr. Reid:

With reference to your letter of September 23rd to the Ambassador, I enclose herewith a copy of a self-explanatory letter which I have today sent to Gordon Arneson of the State Department, concerning parallel U.S.-U.K.-Canada programme of export controls.

Yours sincerely,

James A. Stoen

Escott Reid, Esq.,

Acting Under-Secretary of State

for External Affairs,

O t t a w a, Canada.

5.10.3(US)

SECRET

Washington, D.C.,
October 2, 1948.

My dear Gordon:

On May 19th last, Ed Gullion wrote to me sending forward a list prepared by the United States Atomic Energy Commission of items which the Commission believes should be covered in a parallel U.S.-U.K.-Canada programme of export control. I believe that since Ed's letter was written, Jarvis of our Atomic Energy Control Board in Ottawa learned unofficially that if the U.K. and the Canadian Governments agree upon the desirability of joint action, it was the intention of the U.S. A.E.C. to discuss the programme in detail with U.K. and Canadian officials.

I have now been asked to inform the U.S. A.E.C., through you, that the Advisory Panel on Atomic Energy in Ottawa has agreed:

- (a) that we should cooperate with the United States and the United Kingdom in a programme of export controls upon a selected list of materials and machinery to the extent necessary for security purposes, and
- (b) that for this purpose Canadian officials would be authorized to enter into discussions with U.S. and U.K. officials.

I would assume that with this clearance through you your A.E.C. and our Atomic Energy Control Board could now arrange meetings to suit three-way convenience by direct correspondence.

I am sending a copy of this letter to Nicko Henderson.

Yours sincerely,

T.A. STONE

R. Gordon Arneson, Esq.,
Office of the Under-Secretary,
Department of State,
WASHINGTON, D.C.

tas:lm

~~SECRET~~

ATOMIC ENERGY CONTROL BOARD

When replying 13-C1
Refer to File 10-5
23-1

TO: Dr. C.J. Mackenzie

EXTERNAL AFFAIRS
SECRET FILE

201-AC (5)

Sub. 29 Chron. 79

FROM: G.M. Jarvis
D.J. Dewar

4 August 1948

Attached is a copy of a proposed memorandum (with appendices) for the Advisory Panel on Atomic Energy regarding the proposed parallel U.S.-U.K.-Canada Programme of Export Control of a selected list of materials and machinery.

Also attached is a copy of Document D.R.8, "Memorandum re Export Controls," by Dr. W.B. Lewis, which sets out the Chalk River views on the control of these items.

In view of the information contained in these documents, it is suggested that the following recommendations be made to the Panel:

- (1) That Canada agree to the control of Items 1-10 in the Section marked "Materials" in the list submitted by the U.S. Commission (Appendix A to the first-mentioned memorandum) and point out to the U.S. and U.K. that these are already under export control by virtue of the Atomic Energy Regulations of Canada;
- (2) That Canada agree to export control of Items 1, a,b,c, in the Section marked "Facilities and Equipment" (i.e. Class 1 Facilities in the U.S.). These Items are within the Atomic Energy Regulations of Canada and no amendment to the Regulations would be required to initiate their control.
- (3) That Canada question the need or desirability of exercising control over the Items 2, a (1-15) and 2,b (3-6) in the Section marked "Facilities and Equipment".

..... 2

Dr. C.J. Mackenzie

- (4) That in view of the difficulty in specifying many of the remaining Items for enforcement purposes, and limited manufacture of these Items in Canada, it would be preferable for Canada to establish an informal export control system through liaison and agreement between the Board and Canadian industries manufacturing or importing the items in question. This method could also be adopted in connection with the items mentioned in para. (3) above if this were considered advisable. The Board could also maintain liaison with the U.S. Commission in the case of any Canadian organization wishing to purchase such items in the U.S. in order to ensure that such items were not received by undesirable persons.

If informal control were set up as suggested in para. (4) above, there would be no way of enforcing it as the Regulations now stand. Amending the Regulations to make the definition of "prescribed equipment" as wide as that in the Act would permit enforcement, to the extent from time to time found necessary.

(Sgd.) G.M. Jarvis

(Sgd.) D.J. Dewar

~~SECRET~~
Draft 26.7.48

Memorandum for Advisory Panel on Atomic Energy.

Re: Proposed Parallel U.S.-U.K.-Canada
Program of Export Control on a
Selected List of Materials and Machinery

I have considered the legal questions and have discussed with the scientific advisers of the Board technical questions relating to the proposed control of exports of materials and equipment significant in connection with atomic energy, which are raised by Mr. Pearson's letter of 26 May, 1948 to Dr. Mackenzie, and its attachments, and Mr. Heeney's letter of 14 July, 1948 to Dr. Mackenzie. The correspondence includes a list of items which the U.S.A.E.C. consider should be under export control and a copy of this list is attached as Appendix A.

I. Authority to Control Exports

1. Under the Export and Import Permits Act, the export of goods may be controlled to the extent necessary "in order to implement an intergovernmental arrangement or commitment". The relevant parts of this Act are set out in Appendix B.

It would, I think, be possible by Order in Council under this Act to authorize control of the export of goods to any extent agreed upon between the Canadian Government and either or both of the other governments concerned.

Such control would be effective only for the duration of the Act, which, under the 1948 amendment, is to expire on 31 March 1950.

2. Under The Atomic Energy Control Act, 1946, the Atomic Energy Control Board may, with the approval of the Governor in Council, regulate the export of "prescribed substances and any other things that in the opinion of the Board may be used for the production, use or application of atomic energy", and the Atomic Energy Regulations of Canada provide for export control of "prescribed substances" and "prescribed equipment", as those terms are defined in the regulations. The relevant parts of the Act and the Regulations are set out in Appendix B.

I think that under the Atomic Energy Control Act, 1946, regulations could be made to control export of any of the items mentioned in Appendix A, but a number of the items are not covered by the Atomic Energy Regulations of Canada as they now stand.

II. Existing Export Controls

1. The following items in Appendix A are now under export control, being covered by the Regulations and also, as an administrative measure, included in a list established under The Export and Imports Permits Act:

Materials:-

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15
(Beryllia only).

2. The following items are within the Atomic Energy Regulations of Canada but steps have not been taken to implement control over them:

Materials:-

12.

Facilities and Equipment:-

1.

2

3. It should be added, however, that there is normally no inspection of outgoing goods so that the efficacy of control depends very largely on the disclosure made by the exporter, or on outside information resulting in action being taken in special cases.

III. Policy Considerations

1. No question arises as to the items mentioned above as being already under export control.
2. No technical or policy considerations are suggested against export control of the following items:-

Facilities and Equipment:-

- 1.
3. The remaining items can best be dealt with by individual observations.

Materials:-

- 11.(Fluorocarbons) - This covers quite a large and growing class of compounds, some of which might be known by quite different names and some of which are of use in fields quite unconnected with atomic energy. Specification of the particular compounds that should be controlled would be undesirable for security reasons.
- 12.(High purity Graphite) - Specification of the material that should be controlled would be undesirable for security reasons.
- 13.(Powdered nickel and special nickel fabrications) - Adequate specification might be undesirable for security reasons and any list would probably require constant revision as to special nickel fabrications.
- 14.(Diffusion Pump oils as defined in the item) - The only difficulty suggested is one of enforcement - it would be difficult to supply the enforcement officers with information that would enable them to identify oils as coming within these items.
- 15.(Specially pure refractories) - The difficulty would be in description for enforcement purposes.
- 16.(Insulators)- The difficulty would be in description for enforcement purposes.
- 17.(Unusual metals and chemicals) - The difficulties of description for enforcement purposes are obvious. Adequate description of some things might be undesirable for security reasons.

Facilities and Equipment:-

2(a) Radiation Detection Instruments and their Components

(b) Mass Spectrometers and mass spectrographs including components

These instruments might be used in connection with research work including use of radioactive isotopes which have no security significance and (some) in connection with prospecting and mining for radioactive minerals but they can also form part of the instrumentation of the facilities mentioned in Item 1. There would be difficulty in description of components for enforcement purposes.

2(c), (d), (e) and (f) - (Leak detectors, large vacuum diffusion pumps, vacuum melting furnaces, magnetic separators for ores)

These items may have uses unconnected with atomic energy.

2(g) (High precision laboratory instruments) - The difficulties here would be in providing adequate instructions to enforcement officers, complicated by the fact that many of the instruments would have uses unconnected with atomic energy.

IV. U.S. Suggestions as to Control by Industry Liaison &c.

1. Some of the technical difficulties mentioned in Part III were discussed in Washington last month with Mr. F.H. Warren, then in charge of the U.S.A.E.C. branch concerned, and it was suggested that in some cases where specification would be undesirable from the security point of view, or would be so technical that it could not be covered by published lists, the necessary control might be established by arrangement with the firms concerned. A memorandum from Mr. Warren, setting out his suggestions as to things that might be so controlled, and giving some additional information as to U.S. practices and proposals, is attached as Appendix D.

G. M. Jarvis.

July, 1948

APPENDIX "A"

List Prepared by U.S.A.E.C.

(The list is preceded by the following note:)

1. The attached list is not all inclusive but is considered to cover the most important items which should be represented in a program of export licensing for maintenance of security in atomic energy work.

2. Such licensing does not contemplate complete embargo, but instead, careful administration to prevent misuse and improper distribution.

3. Several items on the list will clearly require competent technical advice for determination of the items to be controlled and the degree of control.

May 7, 1948.

LIST OF ITEMS SUGGESTED FOR UNITED KINGDOM CONTROL
IN CONNECTION WITH ATOMIC ENERGY PROGRAM

Materials

1. Uranium metal, thorium metal; metals and alloys containing uranium and thorium.
2. Uranium compounds including the following:
 - a. Uranium (or uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium dioxide (thoria)
4. Thoriated tungsten wire
5. Incandescent gas mantles
6. Monazite sand or other thorium containing ores.
7. Carnotite, pitchblende or other uranium containing ores
8. Actinium bearing salts and compounds
9. Beryllium metal
10. Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
11. Fluorocarbons
12. High purity graphite
13. Powdered nickel and special nickel fabrications
14. Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump; include silicone diffusion pump fluids)

15. Especially pure refractories for exceptionally high temperatures (such as beryllia, zircon and others)
16. Insulators of exceptionally high dielectric strength at elevated temperatures (such as high zircon and high alumina content)
17. Unusual metals and chemicals, especially when of exceptionally high purity including rare earths.

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material)
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., an electromagnetic or gaseous diffusion process
 - c. Electronuclear machines
 - 1) Cyclotrons
 - 2) Betatrons
 - 3) Synchrotrons
 - 4) Synchro-Cyclotrons
 - 5) Van de Graaff machines (electrostatic generators)
 - 6) Linear accelerators
2. Class II Facilities
 - a. Radiation detection instruments and their components
 - 1) Geiger Mueller, proportional or parallel plate counter scalers.
 - 2) Geiger Mueller or proportional counter rate meters.
 - 3) Scalers, all types adaptable to radiation detection.
 - 4) Geiger Mueller, proportional audio, or mechanical detectors.
 - 5) Integrating ionization chamber meters and ionization chamber rate meters.
 - 6) Geiger Mueller, proportional, or parallel plate counter detector components.
 - 7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere.
 - 8) Counter pulse rate meters.
 - 9) High gain, high impedance linear pulse amplifiers.
 - 10) Geiger Mueller quenching units.
 - 11) Geiger Mueller or proportional coincidence units.
 - 12) Electroscopes and electrometers, pocket and survey types, including dosimeters.
 - 13) Chambers, pocket type, with electrometer charger-reader.
 - 14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere.
 - 15) Resistors, values above 1,000 megohms.
 - b. Mass spectrometers and mass spectrographs including components.
 - 1) Ion sources, mass spectrometer or spectrograph types.
 - 2) Acceleration and focusing tubes.
 - 3) Ionization chamber.
 - 4) Micromicroammeters.
 - 5) Electrometer type tubes as above.
 - 6) Resistors, values over 1,000 megohms.
 - c. Leak detectors, mass spectrometer type.
 - d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet)
 - e. Vacuum metal melting furnaces.
 - f. Magnetic separators for ores.
 - g. High precision laboratory instruments.

APPENDIX "B"

EXTRACT FROM

The Export and Import Permits Act

3. A list of goods to which section five of this Act shall apply may be established by order of the Governor in Council which order shall be published in the Canada Gazette within fifteen days after the passing of such order, and such list may be amended by the Governor in Council by order so published: Provided that no article other than arms, munitions, war materials or supplies, shall be included in such list unless the Governor in Council is satisfied that, in order to ensure an adequate supply and distribution in Canada of such article or any component or material used in the production thereof or in order to implement an intergovernmental arrangement or commitment it is necessary to regulate or control the export of such article.

5. No person shall export or attempt to export from Canada any goods included in a list established pursuant to section three of this Act except under the authority of and in accordance with a permit issued under this Act.

14. This Act shall expire on the thirty-first day of March, nineteen hundred and fifty.

APPENDIX "C"

Extract from

The Atomic Energy Control Act 1946

2. In this Act, unless the context otherwise requires,
- (a) "atomic energy" means all energy of whatever type derived from or created by the transmutation of atoms;
 - (h) "prescribed substances" means uranium, thorium, plutonium, neptunium, deuterium, their respective derivatives and compounds and any other substances which the Board may by regulation made under this Act designate as being capable of releasing atomic energy, or as being requisite for the production, use or application of atomic energy.
- 9.(1) The Board may with the approval of the Governor in Council make regulations,--
- (d) regulating the production, import, export, transportation, refining, possession, ownership, use or sale of prescribed substances and any other things that in the opinion of the Board may be used for the production, use or application of atomic energy;

Extract from

The Atomic Energy Regulations of Canada

101. (1) In these regulations, unless the context otherwise requires;
- (b) "Atomic energy" means all energy of whatever type derived from or created by the transmutation of atoms;
 - (i) "prescribed equipment" means any property, real or personal, that in the opinion of the Board is specially designed or adapted, or that is used or intended to be used for producing or using any fissionable substance but does not include mining, milling, laboratory or other equipment not so specially designed or adapted and not incorporated in equipment used or intended to be used for any of the purposes aforesaid;
 - (j) "prescribed substances" means uranium, thorium, plutonium, neptunium, deuterium, other elements of atomic number greater than 92 and radio-active isotopes of other elements and any substances containing any of the said elements or isotopes;

303. Import and Export

No person shall import into Canada or export from Canada any prescribed substance or prescribed equipment without first producing to the Collector of Customs and Excise at the proposed port of entry or exit an import or export permit from the Board, and no Collector of Customs and Excise shall permit any prescribed substance or prescribed equipment

- (a) to be released for delivery to an importer in Canada; or
- (b) to be exported from Canada,

unless the appropriate permit from the Board is produced to him.

CONFIDENTIAL

APPENDIX "D"

Curtis A. Nelson, c/o National Research Council June 3, 1948
of Canada, Chalk River, Ontario
Frederick H. Warren, Chief, Production Facilities
Control Branch, Division of Engineering, Washington
EXPORT CONTROL - CANADA

SYMBOL: E:PF:ERF

Supplementing information furnished with my memorandum of April 10 and in accordance with agreement reached at our meeting of June 2, there are attached lists of items indirectly controlled by this office, in addition to those in schedules A and B of the AEC Regulation:

1. List of Commodities Under Export Control of O.I.T. Authorized By AEC.
2. Suggested Items For Handling by Industry Liaison.

Also attached for the guidance of the Canadian authorities is a breakdown showing proposed categories of instruments (as listed in Schedule B of the AEC Regulation) for licensing.

Frederick H. Warren.

3. encls.:
 1. List of Commodities
 2. Suggested Items
 3. Categories of Instruments

LIST OF COMMODITIES UNDER EXPORT CONTROL OF O.I.T. AUTHORIZED BY AEC

Dept. of Commerce Schedule B No.	Commodity
770810	Mechanical (Dry) Vacuum Pumps: With a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
770870	Diffusion Vacuum Pumps: 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
775098	Parts for mechanical (dry) vacuum pumps with a theoretical displacement at normal operating speeds of 20 cubic feet per minute or more and capable of producing a vacuum of 1 millimeter of mercury pressure absolute
775098	Parts for diffusion vacuum pumps, 5 inches in diameter and larger (diameter measured inside the barrel at the inlet jet)
829980	Chemical Specialties: Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump) (include silicone diffusion pump fluids)
707410	Induction furnaces, vacuum metal-melting only, and component parts therefor.
663900	Thoriated tungsten wire
664905	Beryllium metal
664910	Bismuth metals and alloys
664950	Radium metal (radium content)
664998	Polonium metal
664998	Gallium metal
813590	Radium salts and compounds for medical use
813590	Radon (radium emanations)
813590	Chemicals containing artificial radioactive isotopes
839900	Actinium bearing salts and compounds
839900	Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
839900	Chemicals containing artificial radioactive isotopes

Dept. of Commerce

Commodity

839900	Gallium salts and compounds
839900	Polonium bearing salts and compounds
839900	Radium ore concentrates
839900	Radium salts and compounds (radium content)
843800	Paints containing radium

CONFIDENTIAL

SUGGESTED ITEMS FOR HANDLING
BY INDUSTRY LIAISON

Fluorocarbons

High purity graphite

Powdered nickel and special nickel fabrications

Especially pure refractories for exceptionally high temperatures (such as beryllias, zircon and others)

Insulators of exceptionally high dielectric strength at elevated temperatures (such as high zircon and high alumina content)

Unusual metals and chemicals, especially when of exceptionally high purity including rare earths

High precision laboratory instruments

Potentiometers
Resistance Bridges
Spectrophotometers
Microphotometers
Spectrographs
Oscillographs
Galvanometers

Magnetic separators for ores

Electronic devices for controlling and/or recording flow in industrial processes

High voltage Power Tubes

Vacuum gauges (ionization type)

PROPOSED CATEGORIES OF INSTRUMENTS FOR LICENSING
(As listed in Schedule B(a))

Conventional
(Info. only)

Restricted Flow
(Based on quantity)

Critical
(In any quantity)

- | | | |
|--|---|--|
| | (i) G-M scalers | (i) Parallel plate counter scalers
Proportional counter scalers |
| | (ii) G-M counter rate meters | |
| | (iii) Scalars | (ii) Proportional counter rate meters |
| | (iv) G-M audio or mechanical
detectors | (iv) Proportional audio or mechanical
detectors |
| (v) Integrating ionization
chamber meter | (v) Ionization chamber rate meter | |
| (vi) G-M counter tubes | | (vi) Proportional or parallel plate
counter detector components |
| | (vii) Micromicroammeters | |
| | (viii) Counter pulse rate meters | |
| | (ix) High gain high impedance
linear pulse amplifier | |
| (x) G-M quenching units | | |
| (xi) G-M or proportional
coincidence units | | |
| (xii) Electroscopes and electrom-
eters, pocket and survey
types, including dosimeters | | (xii) Electrometers, Vibrating Reed |

Proposed Categories Cont.

Conventional
(info. only)

- (xiii) Chambers, pocket type, with electrometer charger-reader
- (xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micromicroamperes, such as FP-54, RH-507, Ck-570AX, VX-32, and VX-41, and equivalent
- (xv) Resistors, values above 1,000 megohms

Restricted Flow
Based on quantity

- (xiv) Electrometer-type electronic tubes with input grid currents of less than 1.0 micromicroamperes, such as FP-54, RH-507, Ck-570AX, VX-32, and VX-41, and equivalent

Critical
In any quantity

S E C R E T

THE NATIONAL RESEARCH COUNCIL

Atomic Energy Project

MEMORANDUM RE EXPORT CONTROLS

by

W. B. Lewis

Director, Division of Atomic Energy Research

Chalk River, Ontario.
29 July, 1948.

S E C R E T

THE NATIONAL RESEARCH COUNCIL
Atomic Energy Project

29 July, 1948.

MEMORANDUM RE EXPORT CONTROLS

The imposition of export controls on materials and equipment is clearly a matter for decision by the government. In view of the very definite suggestions from the U.S. and the fact that these involve controls which will require extensive machinery for their operation, it is thought that the decision will not be made without careful consideration. In such a highly technical field it seems advisable to set down some explanation of the significance of individual items in a background of the fundamental basis for the imposition of such controls. An attempt is therefore made in the following comments to present first the background against which the detailed comments which follow should be considered.

MEANING OF SECURITY

In paragraph I, Appendix A, it is stated that the object of the control is "for maintenance of security in atomic energy work". In this context security implies maintaining a lead in atomic energy work over all potential enemies, while not hampering the general prosperity of potential allies.

BASIS OF CHOICE OF ITEMS FOR EXPORT CONTROL

It is widely recognized that the present lead in atomic energy development held by the United States, Great Britain, and Canada stems from the extensive technological industrial development in these countries. It is presumed that items selected for export control would be those which contribute most to this present lead. The items are therefore those which (a) atomic energy scientists and engineers in the leading countries could least afford to do without; (b) are not such that restricted export would unduly hamper scientific work in the countries of potential allies; (c) are likely to be desired as imports by potential enemies; (d) are items the movement of which would provide useful intelligence information.

It is appreciated that it is most desirable that as many countries as possible should adopt a common list and common policy of control so that free exchanges may take place between those countries.

DEVELOPMENT OF LISTS

On the basis of (a) above the list would be (in descending order of importance) -

- a 1. Materials suitable for the construction of reactors.
- a 2. Special materials required in chemical extraction plants.
- a 3. Materials for installations for separating the isotopes of uranium.
- a 4. Instruments, in particular electronic instruments.
- a 5. Nuclear physics investigation equipment.

Memorandum re Export Controls - continued

On the basis of (b) above it is most important not to apply export limitations to -

- b 1. Instruments in particular electronics instruments.
- b 2. Samples and small quantities of materials with special physical (not nuclear), or chemical properties.
- b 3. Nuclear physics investigation equipment.
- b 4. Structural and chemical materials for industrial plants.
- b 5. Materials and instruments required in scientific research and industry not connected with atomic energy development.

On the basis of (c) above it would be most important to control (in descending order of importance) -

- c 1. Instruments which have required considerable technical development.
- c 2. Materials only produced by technologically difficult processes.
- c 3. Materials whose purity is difficult to control.
- c 4. Rare minerals and substances produced only from rare minerals.

In the field of atomic energy (d) would cover principally materials and instruments specially required for use in high fluxes of neutrons. Also radiation detecting equipment for prospectors could be significant. Materials meeting nuclear physical specifications or their chemical equivalents (e.g.) free from boron and rare earths).

ANNOTATED LIST

The list of items prepared by the United States Atomic Energy Commission, 7 May, 1948, as suggested for United Kingdom control is annotated below to indicate the recommendation and supporting reasoning following the basis of analysis outlined above.

More information of likely traffic than is available here would be needed to determine the type of restrictions to be imposed in many cases. The recommendation is therefore limited to C = control; D = delete i.e. decontrol; ? = uncertain; C ? = control but probably only to obtain records and possibly only for some types; D* = control for radiation health reasons as for radioactive substances only, therefore delete from this list which does not deal with radium, etc.

LIST OF ITEMS SUGGESTED FOR UNITED KINGDOM CONTROL
 IN CONNECTION WITH ATOMIC ENERGY PROGRAM

MATERIALS

	<u>a</u>	<u>c</u>	<u>d</u>	<u>b</u>	<u>Recom- mend</u>
1. Uranium metal, thorium metal; metals and alloys only in large amounts containing uranium and thorium.	1	2,3,4	-	-	C
2. Uranium compounds including the following:	1	4		5(2)	C

Memorandum re Export Controls - continued

MATERIALS - continued

p.3

	<u>a</u>	<u>c</u>	<u>d</u>	<u>b</u>	<u>Recom- mend</u>
a. Uranium (or uranyl) acetate					
b. Uranium (or uranyl) nitrate					
c. Sodium uranate					
d. Uranium oxide or dioxide.					
3. Thorium compounds including the following:					
	1	4		5(2)	C
a. Thorium nitrate					
b. Thorium dioxide (thoria)					
4. Thoriated tungsten wire.	-	2		5	D
5. Incandescent gas mantles.	-	4		5	D
6. Monazite sand or other thorium containing ores.	1	4		-	C
7. Carnotite, pitchblende or other uranium containing ores.	1	4		-	C
8. Actinium bearing salts and compounds.	-	2,4		3	D*
9. Beryllium metal.	1	2,4		5(2)	C
10. Beryllium salts and compounds, including beryllium carbonate and beryllium oxide.	1	4		5(2)	C
11. Fluorocarbons.	3	2		5	?
12. High purity graphite.	1	3		-	C
13. Powdered nickel and special nickel fabrications.	3	2		5	?
14. Diffusion pump oils (oils enabling the attainment of vacuum of 10 ⁻⁴ millimeters of mercury pressure absolute in a single stage diffusion pump; include silicone diffusion pump fluids)	3 3	- 2		5	D C
15. Especially pure refractories for exceptionally high temperatures (such as Beryllia, zircon and others).	1	3		5(2)	?
16. Insulators of exceptionally high dielectric strength at elevated temperatures (such as high zircon and high alumina content).	?	?		?	?
17. Unusual metals and chemicals, especially high purity including rare earths.	1	2	d	2(5)	C except samples.

FACILITIES AND EQUIPMENT

1. Class I Facilities (Facilities capable of producing fissionable material).

a. Nuclear reactors or piles.	1	1		-	C 000228
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Class I Facilities - continued

FACILITIES AND EQUIPMENT - continued

	<u>a</u>	<u>c</u>	<u>d</u>	<u>b</u>	<u>Recom- mend</u>
b. Facilities capable of separating isotopes of uranium, e.g. an electromagnetic or gaseous diffusion process.	3	1		-	C
c. Electronuclear machines					
1) Cyclotrons	5	((1) only		3	C?
2) Betatrons	-	(if very		3	D
3) Synchrotrons	-	(large.		3	D
4) Synchro-cyclotrons	5	"		3	C?
5) Van der Graaff machines (electrostatic generators)	5	"		3	C?
6) Linear accelerators.	5	"		3	C?
 2. <u>Class II Facilities.</u>					
a. Radiation detection instruments and their components.	4	-		1,3	D
1) Geiger Mueller, proportional or parallel plate counter scalers.	4	-		1,3	D
2) Geiger Mueller or proportional counter rate meters.	4	-		1,3	D
3) Scalers, all types adaptable to radiation detection.	4	(1)		1,3	D
4) Geiger Mueller, proportional audio, or mechanical detectors.	4	-		1,3	D
5) Integrating ionization chamber meters and ionization chamber rate meters.	4	-	d	1,3	?
6) Geiger Mueller, proportional, or parallel plate counter detector components.	4	-		1,3	D
7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere.	4	-		1,3	D
8) Counter pulse rate meters.	4	-		1,3	D
9) High gain, high impedance linear pulse amplifiers.	4	(1)		1,3	D
10) Geiger Mueller quenching unit.	4	-		1,3	D
11) Geiger Mueller or proportional coincidence units.	4	(1)		1,3	?
12) Electroscopes and electrometers, pocket and survey types, including dosimeters.	4	(1)	d	1,3	?
13) Chambers, pocket type, with electrometer charger-reader.	4	(1)		1,3	D
14) Electrometer-type electronic tubes with input grid currents of less than 1 micro-microampere.	4	(1)		1,3	D
15) Resistors, values above 1,000 megohms.	4	-		1,3	D

FACILITIES AND EQUIPMENT - continued

	<u>a</u>	<u>c</u>	<u>d</u>	<u>b</u>	<u>Recom- mend</u>
b. Mass spectrometers and mass spectrographs including components.					
1) Ion sources, mass spectrometer or spectrograph types.	5	1		1,3	C?
2) Acceleration and focusing tubes.	5	1		1,3	C?
3) Ionization chamber.	4			1,3	D
4) Micromicroammeters.	4			1,3	D
5) Electrometer type tubes as above.	4	(1)		1,3	D
6) Resistors, values over 1,000 megohms.	4			1,3	D
c. Leak detector, mass spectrometer type.	4	1		1,3	C?
d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet).	3	1		5	C?
e. Vacuum metal melting furnaces.	1	1		5	C?
f. Magnetic separators for ores.	?	1		?	C?
g. High precision laboratory instruments.	4	1		1	?

In view of a.1. above it is suggested that the list should be extended to include heavy water in annual amounts greater than 100 kg. and in view of a.2. add,

- i. Chemically resistant stainless steels.
- ii. Organic solvents in amounts greater than 10 tons.
- iii. Chemicals with a specified low content of boron, rare earths, or heavy elements.
- iv. Calcium or magnesium metal of high purity.
- v. Chemically resistant materials such as fluorine containing organic materials, silicon compounds, polymerized hydrocarbons.

If item l.c.6) Linear Accelerators, is to be controlled it may well be desirable to include component units such as high power microwave or decimetre-wave radio generators.

CATEGORIES OF INSTRUMENTS FOR LICENSING

A comment may be offered on the proposed list submitted for guidance of Canadian authorities by the U. S. Atomic Energy Commission on 3 June, 1948, concerning items (i), (ii), (iv), and (vi), in the "critical" column covering counting rate meters and scalers for high speed operation and their components. It is suggested that the differentiation between these items and the corresponding items in the other columns will be impractical.

CATEGORIES OF INSTRUMENTS FOR LICENSING - continued

p.6

It is presumed that the implied differentiation in the case of (i) and (ii) is the resolving time, but an instrument is likely to be such that it is readily adjusted from one class to another by the manufacturer or the recipient.

To hamper development in a potentially hostile country it is the quality, i.e. reliability of exported electronic apparatus, which should be controlled and not circuit details such as its resolving time.

The distinction between items (iv) in the two columns is not known here.

Item "critical (vi)" would seem to include electronic components for television and radar, unless the word "detector" is deleted. Similarly there is no particular significance in item "critical (xii)" other than that some of the apparatus made in the United States is of high quality. It is the quality of this electrometer for its purpose, namely ionization measurements, rather than the fact that it contains a vibrating reed, which leads to its inclusion on the list. This may be only a very temporary advantage over other types of electrometer.

GENERAL COMMENT

It is suggested that the Canadian Atomic Energy Regulations are in one important respect better than these export control lists, namely, that the amounts and concentration of prescribed substances, which may not be dealt in without an order, are stated.

(Sgd.) W. B. Lewis

W. Bennett Lewis

Director, Division of Atomic Energy Research

WBL/ac

Chalk River, Ontario.

COPY

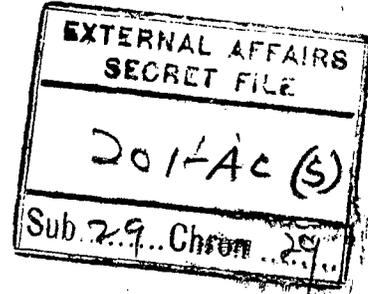
NATIONAL RESEARCH COUNCIL
CANADA

SECRET

Office of the President

OTTAWA, July 16, 1948

Mr. A.D.P. Heeney,
Chairman, Advisory Panel on
Atomic Energy,
Privy Council Office,
Ottawa.



Dear Mr. Heeney:

I received your letter of July 14 and quite agree with you that at the moment there would be little to be gained by bringing this matter of export control before the Panel. As suggested, I will ask Mr. Jarvis if he would look into the matter and obtain an opinion on the legal questions and a report on the technical aspects for future consideration by the Panel.

I might say that personally I feel the American tendency is rather extreme and, on the tentative list of materials and equipment to be put under export control, there are many items which I feel should be allowed to pass in the normal way.

Yours sincerely,

(Sgd.) C.D. Mackenzie,
President.

MEMORANDUM

SECRET

Privy Council Office

Ottawa, July 14, 1948.

Copy for Mr. Pearson.

W.H. Cadoux

A.D.P.H. *Dr.*

000233

SECRET

Handwritten signature/initials

Ottawa, July 14th, 1948.

Dr. C. J. Mackenzie,
President,
National Research Council,
Ottawa, Ontario.

Dear Dr. Mackenzie:

I wish to refer to your letter of May 28th concerning parallel U.S.-U.K.-Canada programmes of export control on a selected list of materials and machinery.

I have some doubts as regards bringing this matter before the Panel at this stage. For example, it seems to me that, first of all, we should be advised whether the authority exists to exercise such control under general export control powers. As to the question of policy which you mention, there are two aspects, one, which is general, is that of increased co-operation with the United Kingdom and the United States. This presents no difficulty in view of the well settled attitude of the government in favour of such collaboration. The other aspect, however, is more technical and more detailed information should perhaps be available before the Panel is requested to make a recommendation. For instance, I think it would be useful to have an idea of the technical problems and policy considerations involved in the proposed extension of control. When these points have been clarified, the Panel could be convened for an expression of opinion.

As you know, it has not been feasible to convene a Panel meeting before now. A meeting was to have been held to consider the third report of the U.N. Atomic Energy Commission, but the matter was brought before the Security Council earlier than was expected and there was no time to get the members

15.7.4 (us)

000234

-2-

together.

I would appreciate your views on what course should now be followed with respect to export control. If you agree with what I have written above perhaps Jarvis could be asked to obtain an opinion on the legal question and a report on technical aspects for the Panel's consideration.

Yours sincerely,

A. D. P. Hoeny
Chairman, Advisory Panel on
Atomic Energy.



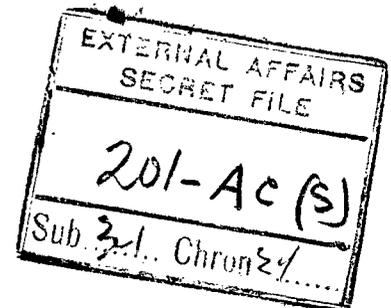
ATOMIC ENERGY CONTROL BOARD
OTTAWA, CANADA

PLEASE REFER
TO FILE 10-5
13-C1
23-1

S E C R E T
BY HAND

8 June 1948

M. Cadieux, Esq.,
Department of External Affairs,
O T T A W A



Re: Proposals as to U.S. - U.K. - Canada
Programme of Export Control.

Dear Mr. Cadieux:

This refers to the draft memorandum for the Panel on this subject, which you were good enough to send me.

I spoke to Mr. F.H. Warren of the U.S.A.E.C. in Washington last week. We did not discuss policy, but the technique of dealing with the situation in Canada if the Governments concerned decided to impose export controls. The following points which developed in the discussion could be mentioned in your memorandum if you thought it worth while:

1. One reason for the U.S. desire that we control exports is the identity of one concern that has imported some equipment into Canada from the U.S.
2. Many of the items mentioned in the U.S. list are already under export control here. Authority probably exists to control the others - but as to some items definitions accurate enough to be of value would be objectionable for security reasons, and as to others,

M. Cadieux, Esq.....

.....2

detailed lists would be so long as to be impracticable.

3. In the U.K., specific authority to control things as relating to atomic energy is limited, but Warren's impression was that sufficient authority existed under general export control powers.

Yours sincerely,



G. M. Jarvis,
Secretary.

GMJ:w

File No... 10-5
13-01
23-1

R E C E I P T

TO: M. Cadieux, Esq., Date..... 8 June 1948

(Original to be signed personally by the recipient and returned to the sender. Duplicate to be retained by the recipient addressed.)

I have personally received from G.M. Jarvis the documents identified below, which have been classified as **Secret**

I assume full responsibility for the safe handling, storage and transmission elsewhere of these documents in accordance with existing regulations governing handling of material so classified.

The classified material is identified as follows:

DESCRIPTION:

Ltr. dated 8 June 1948 to Mr. Cadieux from Mr. Jarvis

VIA: **BY HAND**

Please sign and return to: The Secretary,
Atomic Energy Control Board,
O T T A W A, Ontario.

..... June 8/48
(Date)

..... M. Cadieux
(Received by)

MEMORANDUM

SECRET

Privy Council Office

Ottawa..... May 27th, 1948.

Copy for Mr. Pearson.

Dr.
A.D.P.H.

A large, stylized handwritten signature, possibly reading 'G. L. ...', is written over a diagonal line that extends from the top right towards the center of the page.

000239

SECRET

EXTERNAL AFFAIRS SECRET FILE
201-AC(5)
Sub = 4... Chron 34

Ottawa, May 27th, 1948.

Dr. C. J. Mackenzie,
Chairman,
Atomic Energy Control Board,
Ottawa, Ontario.

Dear Dr. Mackenzie:

Pearson has sent me a copy of his letter to you of May 26th with the enclosed correspondence between Stone and Gullion concerning a parallel U.S.-U.K.-Canada programme of export control on a selected list of materials and machinery.

McNaughton is anxious to have the Advisory Panel consider the U.N. Atomic Energy Commission report to the Security Council in a week or so and I am wondering whether you would like to have the proposed tripartite export control programme discussed by the Panel at the same time? Or would you wish to deal with this as an Atomic Energy Control Board matter only?

Please let me hear from you.

Yours sincerely,

A. D. P. Heeney
Chairman, Advisory Panel on
Atomic Energy.

*Mr. Heeneey to
file.
Secret return*

MEMORANDUM FOR MR. PEARSON

EXTERNAL AFFAIRS
SECRET FILE
201-AC(S)

With reference to the attached letter from Mr. Stone, I have drafted for your signature, if you concur, a letter to Dr. Mackenzie as Chairman of the Atomic Energy Control Board inviting his comments on the proposal for a parallel U.S.-U.K.-Canada programme of export control. After signature, I suggest that the attached letter from Mr. Stone, your letter to Dr. Mackenzie and the other documents be circulated to Mr. Heeneey for his information.

M. Cadieux
M. Cadieux

26.5.24(us)

SECRET

EXTERNAL AFFAIRS
SECRET

201-AC(S)

O t t a w a
May 26, 1948

Sub. 3A Chron

Dear Dr. Mackenzie,

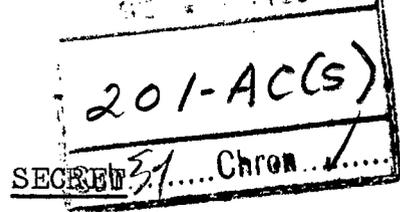
I attach a letter and enclosures which were handed to Mr. Stone in Washington concerning a parallel U.S.-U.K.-Canada programme of export control on a selected list of materials and machinery which the U.S. Atomic Energy Commission consider should be covered by such a control.

Mr. Stone was advised that this should be a C.P.C. matter and that in all probability it would be brought up at the next meeting. It is understood that the State Department would be grateful to have our comments on this proposal.

Yours sincerely,

L. B. PEARSON

Dr. C.J. Mackenzie,
Chairman,
Atomic Energy Control Board,
O t t a w a.



Washington, D.C.,
May 20, 1948.

Dear Mr. Pearson:

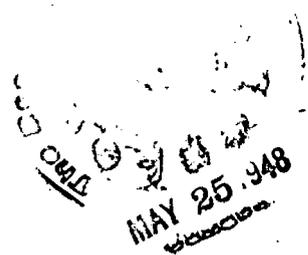
Gullion handed me yesterday a letter and enclosures, copies of which I attach hereto, concerning a parallel U.S.-U.K.-Canada programme of export control on a selected list of materials and machinery which the U.S. Atomic Energy Commission consider should be covered by such a control. This matter arose rather suddenly the other day in view of Warren's journey to Germany to consult with General Clay and Gordon Munro's trip to England.

It has been decided that this should be a C.P.C. matter, and as I have told you in another letter it will be brought up at the next meeting in all probability. In the meantime, the State Department would be grateful to have our comments.

Yours sincerely,

Thomas A. Starn

L.B. Pearson, Esq.,
Under-Secretary of State
for External Affairs,
O t t a w a, Canada.



SECRET

DEPARTMENT OF STATE

WASHINGTON

May 19, 1948

Dear Tom:

I attach copies of recent correspondence with Sir Gordon Munro, including a list prepared by the U.S. Atomic Energy Commission of items which they believed should be covered in a parallel U.S.-U.K.-Canada program of export control, to screen foreign orders for items of potential atomic energy application. I assume that you may want to bring these to the attention of the Canadian members of the Combined Policy Committee.

In addition to working out some coordination of U.S.-U.K.-Canadian controls, we should eventually consider extending the program to other countries in the Western community.

Mr. Frederick H. Warren, who is the Chief of the Production Facilities Control Branch of the Atomic Energy Commission, has left on a trip to Germany to consult with General Clay on the problem of controlling exports from the U.S. zone. He will arrive in Germany on May 18, 1948, and will remain for about a week. He will be ready to discuss the matter with the appropriate U.K. officials for the British zone, subject to General Clay's approval and British wishes. He will then return via the U.K. and will be in London from May 25 through May 27, 1948, to discuss with Roger Makins, and others, the existing British arrangements for control of items in this category and any impressions the British may have formed about the list suggested by us, which was taken to London by Sir Gordon Munro.

Sincerely yours,

/s/

Edmund A. Gullion
Special Assistant to the Under Secretary

Enclosures:

Copy 2B letter 5/7/48 to Sir Gordon Munro from Mr. Gullion
Copy 2B letter 5/7/48 to Mr. Gullion from Mr. Warren with enclosure

The Honorable
Thomas A. Stone,
Canadian Minister,
Washington, D.C.

COPY

✓
May 7, 1948

SECRET

Dear Gordon:

I attach a list prepared by the Atomic Energy Commission of the items which it believes ought to be under close export control. I enclose also a sheet giving the regulations under which it already controls some of these items. You will notice that there are some items in the list of May 7th which do not appear in the printed regulations. These items are of use in other applications beside those of atomic energy development. The Commission does not control these directly through its own licensing power but utilizes Department of Commerce controls, or else relies on a system of voluntary compliance.

As I explained to Donald Maclean, this is a first trial run on our part. I believe that it will give your colleagues some idea of the way the problem is approached in this country.

Sincerely yours,

Edmund A. Gullion
Special Assistant to the Under Secretary

Sir Gordon Munro,
British Treasury Delegation,
1800 K Street, N.W.,
WASHINGTON, D.C.

000245

UNITED STATES ATOMIC ENERGY COMMISSION

WASHINGTON 25, D.C.

May 7, 1948.

SECRET

Mr. Edmund A. Gullion
Special Assistant to the Undersecretary of State
Department of State
Washington 25, D.C.

Subject: Items for licensing control in United Kingdom
atomic energy program.

Dear Mr. Gullion:

Per your request of yesterday, there is transmitted herewith for conveyance to the British representatives, our proposed list of items which we believe should be reflected immediately in a parallel program of export control.

We assume of course, that the British control system like ours, would be sufficiently flexible to permit the addition by administrative authority, of other items which may be judged of sufficient importance to come under this same control.

Very truly yours,

FREDERICK H. WARREN
Chief, Production Facilities
Control Branch

Attachment (Unclassified)

COPY

✓
May 7, 1948

COMMENTS ON ATTACHED LETTER OF ITEMS RECOMMENDED FOR LICENSING IN
CONNECTION WITH ATOMIC ENERGY WORK

1. The attached list is not all inclusive but is considered to cover the most important items which should be represented in a program of export licensing for maintenance of security in atomic energy work.

2. Such licensing does not contemplate complete embargo, but instead, careful administration to prevent misuse and improper distribution.

3. Several items on the list will clearly require competent technical advice for determination of the items to be controlled and the degree of control.

May 7, 1948.

LIST OF ITEMS SUGGESTED FOR UNITED KINGDOM CONTROL
IN CONNECTION WITH ATOMIC ENERGY PROGRAM

Materials

1. Uranium metal, thorium metal; metals and alloys containing uranium and thorium.
2. Uranium compounds including the following:
 - a. Uranium (or uranyl) acetate
 - b. Uranium (or uranyl) nitrate
 - c. Sodium uranate
 - d. Uranium oxide or dioxide
3. Thorium compounds including the following:
 - a. Thorium nitrate
 - b. Thorium dioxide (thoria)
4. Thoriated tungsten wire
5. Incandescent gas mantles
6. Monazite sand or other thorium containing ores.
7. Carnotite, pitchblende or other uranium containing ores
8. Actinium bearing salts and compounds
9. Beryllium metal
10. Beryllium salts and compounds, including beryllium carbonate and beryllium oxide
11. Fluorocarbons
12. High purity graphite
13. Powdered nickel and special nickel fabrications
14. Diffusion pump oils (oils enabling the attainment of vacuum of 10^{-4} millimeters of mercury pressure absolute in a single stage diffusion pump; include silicone diffusion pump fluids)
15. Especially pure refractories for exceptionally high temperatures (such as beryllia, zircon and others)

16. Insulators of exceptionally high dielectric strength at elevated temperatures (such as high zircon and high alumina content)
17. Unusual metals and chemicals, especially when of exceptionally high purity including rare earths.

Facilities and Equipment

1. Class I Facilities (Facilities capable of producing fissionable material)
 - a. Nuclear reactors or piles
 - b. Facilities capable of separating isotopes of uranium, e.g., an electromagnetic or gaseous diffusion process
 - c. Electronuclear machines
 - 1) Cyclotrons
 - 2) Betatrons
 - 3) Synchrotrons
 - 4) Synchro-cyclotrons
 - 5) Van de Graaff machines (electrostatic generators)
 - 6) Linear accelerators
2. Class II Facilities
 - a. Radiation detection instruments and their components
 - 1) Geiger Mueller, proportional or parallel plate counter scalars.
 - 2) Geiger Mueller or proportional counter rate meters.
 - 3) Scalars, all types adaptable to radiation detection.
 - 4) Geiger Mueller, proportional audio, or mechanical detectors.
 - 5) Integrating ionization chamber meters and ionization chamber rate meters.
 - 6) Geiger Mueller, proportional, or parallel plate counter detector components.
 - 7) Micromicroammeters capable of measuring currents of less than 1.0 micromicroampere.
 - 8) Counter pulse rate meters.
 - 9) High gain, high impedance linear pulse amplifiers.
 - 10) Geiger Mueller quenching units.
 - 11) Geiger Mueller or proportional coincidence units.
 - 12) Electroscopes and electrometers, pocket and survey types, including dosimeters.
 - 13) Chambers, pocket type, with electrometer charger-reader.
 - 14) Electrometer-type electronic tubes with input grid currents of less than 1 micromicroampere.
 - 15) Resistors, values above 1,000 megohms.
 - b. Mass spectrometers and mass spectrographs including components.

- 3 -

- 1) Ion sources, mass spectrometer or spectrograph types.
 - 2) Acceleration and focusing tubes.
 - 3) Ionization chamber.
 - 4) Micromicroammeters.
 - 5) Electrometer type tubes as above.
 - 6) Resistors, values over 1,000 megohms.
- c. Leak detectors, mass spectrometer type.
- d. Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at inlet jet)
- e. Vacuum metal melting furnaces.
- f. Magnetic separators for ores.
- g. High precision laboratory instruments.

TITLE 11—ATOMIC ENERGY

Chapter I—United States Atomic Energy Commission

PART 50—CONTROL OF FACILITIES FOR THE PRODUCTION OF FISSIONABLE MATERIAL

GENERAL PROVISIONS

- Sec.
50.1 Basis and purpose.
50.2 Definitions.

GENERAL RESTRICTIONS

- 50.10 License required.
50.11 Activities incident to export.
50.12 Revocation, suspension, modification of licenses.
50.13 Other activities.

APPLICATIONS FOR AND ISSUANCE OF LICENSES

- 50.20 Applications for licenses.
50.21 Issuance of licenses.
50.22 Standards for issuance of licenses.

TYPES AND CONDITIONS OF LICENSES

- 50.30 Types of licenses.
50.31 Conditions of licenses.
50.32 Revocation, suspension, modification of licenses.
50.33 Transfer of licenses.

REPORTS

- 50.40 Reporting possession or title.
50.41 Reports.

VIOLATIONS

- 50.50 Penalties for violations.

INTERPRETATIONS, PETITIONS, COMMUNICATIONS

- 50.60 Valid interpretations.
50.61 Petitions.
50.62 Communications.

SCHEDULES

- 50.70 Schedule A: Class I facilities.
50.71 Schedule B: Class II facilities.

EFFECTIVE DATE

- 50.80 Effective date.

AUTHORITY: §§ 40.1 to 40.80, inclusive, issued pursuant to the Atomic Energy Act of 1946 (Pub. Law 585, 79th Cong.; 60 Stat. 755-ff).

GENERAL PROVISIONS

§ 50.1 *Basis and purpose.* The regulations in this part, for the control of facilities for the production of fissionable material, are promulgated by the United States Atomic Energy Commission pursuant to the Atomic Energy Act of 1946 (60 Stat. 755; 42 U. S. C. 1801 *et seq.*) to effectuate the policies and purposes of the Act.

§ 50.2 *Definitions.* (a) As used in this part, the term "facilities for the production of fissionable material," means (1) any equipment or device capable of such production and (2) any important component part especially designed for such equipment or devices as determined by the Commission. All such facilities are, for the purposes of the regulations in this part, classified as follows:

(1) Class I: Any facility (other than a Class II facility) capable of producing any fissionable material, including items listed in Schedule A (§ 50.70);

(2) Class II: Any item listed in Schedule B (§ 50.71). The Commission has determined that such items are important component parts especially designed for equipment or devices capable of the production of fissionable material.

(b) The term "person" means any individual, corporation, partnership, firm, association, trust, estate, public or pri-

vate institution, group, the United States or any agency thereof, any government other than the United States, any political subdivision of any such government, and any legal successor, representative, agent, or agency of the foregoing, or other entity, but shall not include the Commission, or officers or employees of the Commission in the exercise of duly authorized functions.

(c) The term "Commission" means the Atomic Energy Commission created by the Atomic Energy Act of 1946, or its duly authorized representative.

(d) The term "United States", when used in a geographical sense, includes all Territories and possessions of the United States and the Canal Zone.

(e) The term "fissionable material" means plutonium, uranium enriched in the isotope 235, any other material which the Commission determines to be capable of releasing substantial quantities of energy through nuclear chain reaction of the material, or any material artificially enriched by any of the foregoing, but does not include source materials, as defined in the Atomic Energy Act of 1946.

GENERAL RESTRICTION

§ 50.10 *License required.* Unless authorized by a license issued by the Commission, no person shall manufacture, produce, transfer, or acquire facilities for the production of fissionable material. Licenses issued by the Commission are of two basic types, general and specific (see § 50.33), depending on the nature of the activity to be authorized.

§ 50.11 *Activities incident to export.* A specific license must be obtained to authorize export from the United States of facilities for the production of fissionable material, or to authorize the manufacture, production, transfer, or acquisition of such facilities for export.

§ 50.12 *Domestic activities.* (a) A specific license must be obtained (except as indicated in paragraph (c) below) to authorize manufacture, production, transfer, or acquisition of Class I facilities.

(b) A general license is hereby issued for manufacture, production, transfer and acquisition of Class II facilities which takes place within the United States and is not for export. This general license shall be deemed to include manufacture, production, transfer, and acquisition of Class II facilities for incorporation into other Class II facilities prior to export of the latter. Each person acting under authority of this general license remains subject to the reporting requirements of §§ 50.40 and 50.41 below.

(c) No license is required for activities expressly excepted from the licensing requirements of the Atomic Energy Act of 1946; that is, for manufacture, production, transfer, or acquisition of Class I or Class II facilities incident to or for the conduct of research or development activities in the United States of the types specified in section 3 of the Act.

§ 50.13 *Other activities.* A specific license must be obtained to authorize manufacture, production, transfer, or acquisition of facilities for the production of fissionable material in cases other than those specified in §§ 50.11 and 50.12 above.

APPLICATIONS FOR AND ISSUANCE OF LICENSES

§ 50.20 *Applications for licenses.* License applications for the activities covered by § 50.11 above shall be filed in duplicate with the United States Atomic Energy Commission, on Form AEC-17, copies of which may be obtained from the Commission. License applications for all other activities shall be filed by letter. In accordance with instructions given in Form AEC-17, applicants using that form shall also file with the Commission five copies of Shipper's Export Declaration (Department of Commerce Form 7525-V).

§ 50.21 *Issuance of licenses.* Upon a determination that an application meets the requirements of the Atomic Energy Act of 1946 and of the regulations of the Commission, the Commission will issue a license by approving, upon such conditions as it deems appropriate and in accordance with law, the application filed, forwarding a copy of the license to the applicant. Confirmation of such approval in appropriate cases will be stamped on all copies of the Shipper's Export Declaration which, with the exception of one copy retained for the Commission's files, will be returned to the applicant for use in complying with Customs procedures at the time of export.

§ 50.22 *Standards for issuance of licenses.* In making the determination mentioned in the preceding section, the Commission will be guided by the following standards:

(a) Assuring the common defense and security;

(b) Assuring an adequate supply of facilities for the production of fissionable material;

(c) Preventing the use of such facilities in a manner inconsistent with the national welfare;

(d) Effectuating the policies and purposes of the Atomic Energy Act of 1946.

So far as consistent with these standards, licenses will be granted for the conduct of normal business activities.

TYPES AND CONDITIONS OF LICENSES

§ 50.30 *Types of licenses.* A general license has been issued in the cases specified in § 50.12 (b) above and in such cases the filing of an application with the Commission is not necessary. Specific licenses are issued to named persons in response to applications filed with the Commission. So far as consistent with the Atomic Energy Act of 1946, licenses will be designed to fit the normal business requirements of the licensee.

§ 50.31 *Conditions of licenses.* Each license will require the licensee to comply with certain conditions, including the filing of reports with the Commission. Willful failure of a licensee to file any such report which truthfully sets forth all information required, or willful failure to comply with any other condition of the license, shall constitute a violation of the regulations in this part.

§ 50.32 *Revocation, suspension, modification of licenses.* Any license may be modified, withdrawn, suspended, revoked, or annulled at any time in the discretion of the Commission upon a determination by the Commission that the public

health, interest, or safety requires such action, or that the licensee has willfully failed to comply with any condition of the license. In the absence of such a determination, no modification, withdrawal, suspension, revocation or annulment of any license will be made except upon application therefor by the licensee or unless, prior thereto, facts or conduct warranting such action have been called to the attention of the licensee in writing and the licensee has been accorded opportunity to demonstrate or achieve compliance with all lawful requirements. Nothing in this part shall limit the authority of the Commission to issue or amend its regulations in accordance with law.

§ 50.33 *Transfer of licenses.* Licenses shall be non-transferable.

REPORTS

§ 50.40 *Reporting possession or title.*

(a) Any person (whether or not a licensee) who, on the effective date of the regulations of this part, has possession of or title to any Class I facility for the production of fissionable material (including those listed specifically in Schedule A, § 50.70) shall, not later than 60 days after such date, file with the Commission a reasonably detailed statement of:

- (i) The location of the facility;
- (ii) Its present use;
- (iii) Its proposed use;
- (iv) Its engineering specifications, including capacity;

(v) The name, title, and address of the persons having control of the facility.

(b) The requirement of this section does not apply to any facility held under authority of a contract for an arrangement with the Commission.

NOTE: The term "person" as defined in section 18 (c) of the Atomic Energy Act of 1946 and in § 50.2 does not include the Commission or officers or employees of the Commission in the exercise of duly authorized functions. Consequently, the requirement of this § 50.40 does not apply in such cases.

§ 50.41 *Reports.* Reports in addition to those called for in licenses may be required by the Commission from time to time, subject to approval by the Bureau of the Budget in certain cases, with respect to the ownership, possession, manufacture, production, export, shipment, transfer, acquisition or other handling of facilities for the production of fissionable material, as the Commission may deem necessary.

VIOLATIONS

§ 50.50 *Penalties for violations.* A violation of the regulations in this part shall be deemed to be a violation of the Atomic Energy Act of 1946, and shall subject the violator to the penalties therein prescribed. In addition, the Commission may take such action with respect to the facilities involved in any violation as it deems appropriate and in accordance with law.

INTERPRETATIONS, PETITIONS,
COMMUNICATIONS

§ 50.60 *Valid interpretations.* Except as specifically authorized by the Commission,

no interpretation or explanation of the meaning of the regulations in this part issued by any officer or employee of the Commission other than one issued by the General Counsel in writing will be recognized to be valid and binding upon the Commission.

§ 50.61 *Petitions.* Petitions for relief from any restrictions imposed under the regulations in this part may be made by filing a letter, in duplicate, with the Commission, stating the reasons why the petition should be granted.

§ 50.62 *Communications.* All communications concerning the regulations of this part or any license issued under them should be addressed to the United States Atomic Energy Commission, Washington 25, D. C., Attention: Director of Engineering.

SCHEDULES

§ 50.70 *Schedule A: Class I facilities* (see §§ 50.2, 50.20, and 50.40). As defined in § 50.2 above, a Class I facility is any facility (other than a Class II facility) capable of producing any fissionable material, such as (a) nuclear reactors or piles, (b) facilities capable of the separation of isotopes of uranium, and (c) electronuclear machines (e. g., cyclotrons, synchrocyclotrons and linear ion accelerators) capable of imparting energies in excess of 1 Mev each to positively charged nuclear particles or ions.

NOTE: Under section 4 (c) (1) of the Atomic Energy Act of 1946 the Commission, as agent of and on behalf of the United States is made the exclusive owner of all facilities for the production of fissionable material other than facilities which (a) are useful in the conduct of research and development activities in the fields specified in section 3 of the Act, and (B) do not, in the opinion of the Commission, have a potential production rate adequate to enable the operator of such facilities to produce within a reasonable period of time a sufficient quantity of fissionable material to produce an atomic bomb or any other atomic weapon. The listing of a facility for the purposes of the regulations in this part shall not be deemed to be an expression of the opinion of the Commission as to ownership of any such facility for the purposes of section 4 (c) (1) of the Act.

§ 50.71 *Schedule B: Class II facilities* (see §§ 50.2 and 50.20). A Class II facility is any item listed in this Schedule B. The Commission has determined that the following items are important component parts especially designed for equipment or devices capable of the production of fissionable material:

(a) Radiation detection instruments, and their major components, designed, or capable of being adapted, for detection or measurement of nuclear radiations, such as alpha and beta particles, gamma radiation, neutrons and protons, including the following:

- (i) Geiger Mueller, proportional, or parallel plate counter scalers.
- (ii) Geiger Mueller or proportional counter rate meters.
- (iii) Scalers (adaptable to radiation detection).
- (iv) Geiger Mueller, proportional audio, or mechanical detectors.

(v) Integrating ionization chamber meters and ionization chamber rate meters.

(vi) Geiger Mueller, proportional, or parallel plate counter detector components.

(vii) Micromicroammeters capable of measuring currents of less than 1 micro-microampere.

(viii) Counter pulse rate meters.

(ix) High gain high impedance linear pulse amplifiers.

(x) Geiger Mueller quenching units.

(xi) Geiger Mueller or proportional coincidence units.

(xii) Electroscopes and electrometers, pocket and survey types, including dosimeters.

(xiii) Chambers, pocket type, with electrometer charger-reader.

(xiv) Electrometer - type electronic tubes with input grid currents of less than 1.0 micromicroamperes, such as FP-54, RH-507, Ck-570AX, VX-32, and VX-41, and equivalent.

(xv) Resistors, values above 1,000 megohms.

(b) Mass spectrometers and mass spectrographs, of all mass ranges, and their major components, including the following:

(i) Leak detectors, mass spectrometer, light gas type.

(ii) Mass spectrometers or mass spectrographs.

(iii) Ion sources, mass spectrometer or spectrograph type.

(iv) Acceleration and focussing tubes, mass spectrometer and spectrograph types.

(v) Ionization chambers, mass spectrometer detector types.

(vi) Micromicroammeters capable of measuring current of less than 1.0 micro-microampere.

(vii) Electrometer tubes (as listed in (a) (xiv) above).

(viii) Resistors, values above 1,000 megohms.

(c) Vacuum diffusion pumps 12 inches diameter and larger (diameter measured inside the barrel at the inlet jet).

(d) Electronuclear machines, and their basic component parts, capable, with or without modification, of sustaining potential differences in excess of 100,000 volts against the discharging action of positive ion currents in excess of 10⁻⁷ amperes, such as belt type electrostatic generators (Van de Graaff machines).

§ 50.80 *Effective date.* The regulations in this part shall become effective at midnight, November 20, 1947, this effective date, which is less than 30 days subsequent to publication, is found necessary and appropriate by the Commission for assuring the common defense and security.

Dated at Washington, D. C., this — day of November 1947.

UNITED STATES ATOMIC ENERGY
COMMISSION,
SUMNER T. PIKE,
Acting Chairman.