

TOP SECRET ATOMIC

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FISSILE AND OTHER MATERIALS

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Barter Option, and Financial Arrangements

(Note by A.E./A.V.)

URANIUM ORE is acquired by the U.K.A.C.A. mainly on long term contracts from Canada, South Africa and elsewhere. Stocks and commitments are more than sufficient for many years and the A.E.A. is endeavouring to modify its commitments to the Canadian producers.

N.O.A. is charged interest on stocks equivalent to one year's requirements. The C.S.S.B. is similarly charged; the balance of stocks is financed by the A.E.A. itself.

U.235 is produced from uranium ore at Capenhurst but will also be obtained by barter from the U.S.A. in exchange for plutonium. The arrangement provides for the following imports:-

7,500 kg (93%) total - 500 kg in 1964
1,500 kg in each of 1965/68
1,000 kg in 1969

There is also an option, to be exercised before December 31st, 1962, to take up to 5,000 kg at a uniform rate from 1965-69.

The 7,500 kg will be paid for with Pu at the rate of 1 kg Pu for 1.7 kg U.235. The Pu is to be delivered as follows:-

500 kg a year in 1965 and 1966
1,000 kg in 1967
1,500 kg in 1968
the balance in 1969 (total 4,261.4 kg Pu)

Deliveries may be made earlier if we like. If we deliver more Pu than the programme calls for, the balance will be charged at .96 kg Pu to 1.76 kg U.235 (instead of 1 kg Pu). If we deliver less, the balance will be charged 4% interest.

The optional 5,000 kg will be paid for in dollars.

On the basis of the current workload programme there will be a continual surplus of U.235 and plans are in hand to reduce the output from Capenhurst (U.S. material is cheaper).

PLUTONIUM is produced in U.K. reactors. As with U.235 there is a prospective surplus; plans for disposing of some to the U.S.A. and for reducing output are under consideration.

FINANCING OF SURPLUS U.235 and Pu.

It has been agreed interdepartmentally that the surpluses should be dealt with a year at a time and that to the extent that the current year's surpluses are supported by Service orders for warheads they should be paid for by N.O.A. (who will pass on the cost in the price of warheads). The Service Departments have been asked to consider whether they can order in advance to provide backing for the surpluses which will exist after 1961/62. N.O.A. has agreed to buy U.235 required for Skybolt on the F(2)S Veto, but we believe the A.E.A. should be responsible for Pu surpluses, which are not backed by any foreseen requirements. This is under discussion with the Treasury. (July 1961).

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TRITIUM (A.M.) is obtained from the U.S.A. by barter for Pu. 1 kg Tritium for 80 kg Pu. Deliveries were agreed as follows :-

1959 or 60	$\frac{1}{2}$ kg	In addition there is an option on a further 3 kgs in 4 instalments of $\frac{3}{4}$ kg annually 1966-69. Option to be exercised not later than 31st December, 1963.
1961	$\frac{1}{2}$ kg	
1962	$\frac{1}{2}$ kg	
1963	$\frac{1}{2}$ kg	
1964	1 kg	
1965	1 kg	
TOTAL	<u>$4\frac{1}{2}$ kg</u>	

M.O.A. has agreed to finance requirements of A.M. and it will be paid for on the main Vote, apart from quantities required to match Service deliveries of warheads, which will be paid for from the P(R)S Vote. There will be a considerable stock in excess of requirements for the next five years (to 1965/66) but it has been considered inexpedient, at this stage, to ask the U.S. for a revision of the delivery programme.

LITHIUM is procured by M.O.A. from the U.S.A. thro' B.F.S.M. and U.K. T.S.D. under the U.S. agreement. It is bought on the Main Vote and sold to the War Office for fabrication at Chorley R.O.F., the Main Vote being repaid by the War Office. The agreement provides for 6,000 kg (95%) in 1959-62 with an option on 6,000 kg to be delivered uniformly over 1963-69, payment to be made in dollars (current price £315 per kg). Negotiations are in train to buy under the option (which had to be taken up by 1st July this year) 350 kg a year over 1963-69 (total 2,450 kg, instead of 6,000 kg). At the same time the Americans were sounded to see if they want to buy any surplus Pu. (We have a plant in moth balls in R.O.F. Chorley capable, when in operation, of producing some 300 kg a year at a cost 50% higher than the U.S. price.)

A.S./A.W.
21st July, 1961.

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