

March 2, 1960

**Maurice Couve de Murville, 'Reflections on France's
isolated pursuit of the constitution of an
autonomous "deterrent"'**

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Summary:

This Foreign Ministry analysis was written for French Foreign Minister Maurice Couve de Murville. It spells out the obstacles facing an independent deterrent two weeks after France's first nuclear test on February 13, 1960. The author cautions that a "minor deterrent" of a few dozen 100-kilton atom bombs loaded on vulnerable, short-range Mirage IV A fighter-bombers would cost hundreds of billions of francs. Intermediate-range ballistic missiles with which to threaten Moscow would require an additional 8-10 years and a further cost of 500 billion francs (around \$100 billion in 1960). In order to match the superpowers' thermonuclear level, that figure could rise as high as "several trillion" over more than a decade, during which time the United States and the Soviet Union might well leapfrog the French force de dissuasion.

Credits:

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Contents:

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Paris, on March 2, 1960

SUBJECT: Reflections on France's isolated pursuit of the constitution of an autonomous "deterrent".

1. Independently of the obstacles that an international agreement on the suspension of experiments could bring to the performance of our nuclear program, it is only in 1963-1964 that France could hope, at best, to have a few dozen atomic bombs of a power of 1 kiloton and aerial delivery vehicles (Mirage IV A?) theoretically capable of dropping them on soft and not too distant targets, the overall expense not exceeding 400 billion.

At that time, according to the most qualified authorities, rockets will have replaced aircraft, which can only play a secondary role due to their extreme vulnerability (progress in surface-to-air missiles). This close look at the fact that 100 kiloton bombs require, to be effective, high accuracy, dispels the hope of having even a minor "deterrent," at that time. At most it could only be a question of having the power to cause harm, the use of which will seem highly unlikely to anyone, given the unstoppable and total retaliation that such use would instantly call down.

2. The construction of a national IRBM, undertaken now, could lead to an operational device at the earliest only in 1968, at a cost of 500 billion of old francs, plus 2 or 3 billion per rocket manufactured (200 devices: 400 to 600 billion). [Could be worth noting in a footnote that monetary reforms replaced old francs with new francs at a rate of 100-to-1]

There would remain the matter of atomic warheads. The effectiveness of the devices being an essential function of their precision - since it is a force that remains very limited in terms of numbers - only thermonuclear warheads on the destructive order of a megaton can give to this force the efficiency desired. However, we still only have a vague idea of

the cost of thermonuclear warheads and of the possible date of their production (10 years?). It is nevertheless certain that, for the production of a number of thermonuclear warheads corresponding to the number of delivery vehicles, an expenditure on the order of several thousand billion francs would need to be envisaged.

Finally, very significant expenses would still have to be planned for to ensure the mobility of the launching sites of the delivery vehicles, either on land or at sea (nuclear-powered submarine?), mobility without which the vehicles would lose a large part of their value.

3. The technical difficulties, the expenses and the probable leads times mentioned above only represent part of the problem.

10 years from now, if no effective weapon limitation measures have been taken by then, won't the major nuclear powers have acquired new weapons prompting the decommissioning of those they are currently building?