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APR 02 '99 09:34AM



APPROVED FOR RELEASE
DATE: APR 2001

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SCIENTIFIC INTELLIGENCE DIGEST

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INTELLIGENCE
AGENCY



OSI-SD/65-6
June 1965

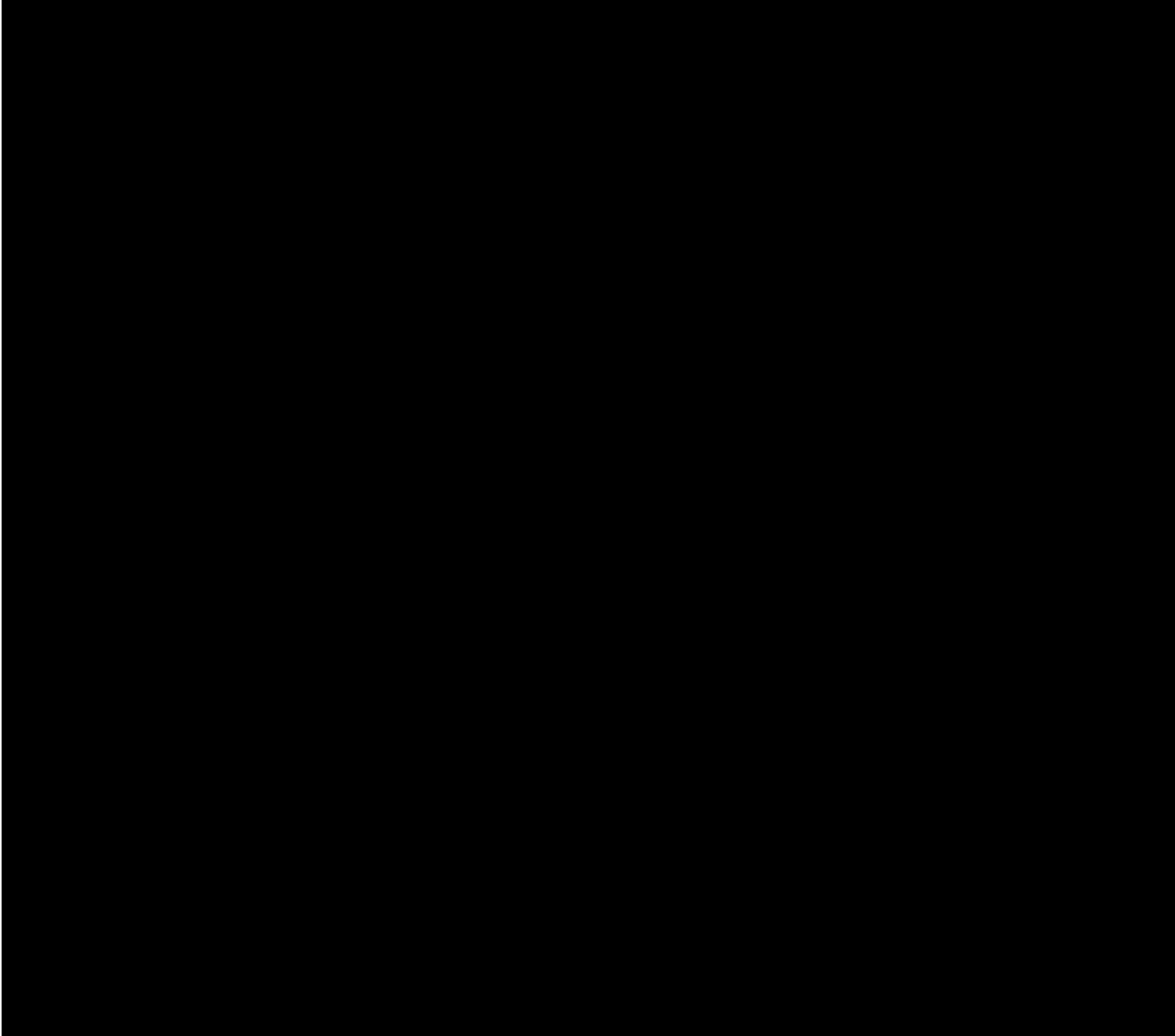
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Indian Plutonium Uses

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INDIAN PLUTONIUM USES


OSI/CIA

The Indian Government has authorized the Indian Atomic Energy Establishment at Trombay to proceed with the installation, on an accelerated basis, of facilities for the production of plutonium metal. The facilities were practically completed by January 1965 and will be able to produce plutonium metal at the rate of between 250 to 500 grams per week. A large-scale facility for plutonium metal reduction and plutonium metallurgy research is still expected to be completed in 1968. The size of the present plutonium facilities is excessive for India's present peaceful needs, but puts India in a position to support a small nuclear weapon program should the decision be made to do so.

The Indians have stated that the plutonium metal is to be used to produce plutonium/aluminum alloy fuel elements to provide a slight enrichment in the Canada-India Reactor (CIR) at Trombay to flatten the power distribution and flux.

The CIR is being improved as a facility for development work by the addition of two major in-pile test loops, whose operation will be enhanced by the use of enriched fuel in the reactor. One of these loops uses pressurized water coolant and is being supplied by Canada. This loop is expected to start operation in three to four months. The second loop is being built by India for organic coolant work and is expected to be installed in the reactor in six to nine months. The Indians also plan to use plutonium to enrich a natural-uranium-fueled prototype heavy-water test reactor under development. This reactor, if built, will be a step in the development of planned future power reactors. While the present Indian nuclear power program is based on the purchase of foreign reactors, the long-term program is to produce plutonium from natural-uranium-fueled reactors for use as fuel in advanced fast breeder reactors.



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