

CHAPTER I: DEPARTMENT OF ATOMIC ENERGY

Uranium Corporation of India Limited

1.1 Loss due to non-recovery of by-product

Delay in setting up of By-product Recovery Plant for magnetite by Turamdih mill resulted in a loss of ₹ 13.47 crore during the period from March 2009 to November 2013.

Uranium Corporation of India (Company), appointed M/s. Development Consultants Pvt. Limited (DCPL) as consultant for setting up a Uranium ore mine at Turamdih (1982) in the district of Singhbhum East, Jharkhand. The Detailed Project Report (DPR) prepared (1984) by DCPL was approved by the Government of India (GOI) in April 1989, after the environment and forest clearances. The project work was started accordingly but in May 1992, the activities of Turamdih mines were shelved by GOI after reviewing the overall nuclear power programme. The Company again received approval during 2001 from GOI for re-opening Turamdih mine. The Company re-engaged DCPL for updating the Detailed Project Report of the Turamdih Process Plant and its Board of Directors approved the updated report in December 2002. The construction work of the Uranium plant commenced from September 2003. The trial run of the plant began in June 2007 and the plant was commissioned at a cost of ₹ 343.27 crore in March 2009. The ore fed in the plant for production of uranium also contained magnetite. The Company decided (November 2011) to invest a sum of ₹ 20 crore for setting up a By-product Recovery Plant to recover magnetite from the tailings[▼] generated from Turamdih mill which was approved (May 2013) by GOI.

In this connection, Audit observed the following:

- The Company had already commissioned a uranium plant at Jaduguda in 1968 in Singhbhum belt of Jharkhand, the ore from which contained 3.2 *per cent* magnetite. Thus, the Company constructed a magnetite recovery plant in 1982 and further upgraded it in 1984. Later in 2003, the ore mined out from Turamdih mine was used in the Jaduguda mill.
- The delayed decision of setting up a magnetite recovery plant resulted in a loss of ₹ 13.47 crore due to non-recovery of magnetite from the tailings of Turamdih Plant during the period, March 2009 to November 2013. National resources would continue to be wasted and the Company would continue to suffer losses for not being able to sell magnetite till commissioning of the magnetite recovery facility, though it has a good market.

▼ *Tailings are materials left over after extraction of valuable minerals from ore.*

The Ministry in its reply (December 2013) *inter-alia* stated that:

- The inference of presence of magnetite on economically recoverable scale in the entire Singhbhum Thrust Belt spread over 150 km is incorrect. The economical recovery of any metal in a confined zone would depend upon proportionate distribution of various minerals and its form. Turamdih process plant was commissioned in 2009. The presence of magnetite in the mineralogy of ore fed to Turamdih Process Plant was ascertained in 2011.
- It is necessary to confirm the availability of magnetite in the mining zone as well as in the solid stream after leaching (called tailings). This necessitated actual commissioning of the plant so that sample from the operating plant for a larger period could be collected for sampling and analysis. This gives confidence for the economical justification of the commercial investment in true working condition.

The Ministry's reply is not acceptable as:

- The Company was aware about the presence of magnetite in Singhbhum Thrust Belt and was also extracting magnetite from its Jaduguda plant since 1982.
- The ore mined out from Turamdih mine was used in the Jaduguda mill between 2003 to 2009 which establishes the fact that the Company was aware about the magnetite content in Turamdih Ore since 2003.
- The trial run of complete process stream of Turamdih plant was started in June 2007 and commissioned in March 2009. Given the fact that Turamdih Ore was being used in Jaduguda mill since 2003, the reply that the presence of magnetite in the mineralogy of ore fed to Turamdih Process Plant was ascertained in only 2011 is not justified.
- GOI report which was published in 1937 titled "Mineral deposits of Eastern Singhbhum and surrounding areas" stated that magnetite was the most abundant material in the area and was present in almost every rock of Singhbhum. Further, the study report prepared in 1977 by the Company mentioned presence of magnetite in mineralised shear zone of Singhbhum Thrust Belt.
- From various studies undertaken since 1937, the Company was well aware of the presence of magnetite on an economically recoverable scale in the entire Singhbhum Thrust Belt. After detailed studies regarding the good demand for magnetite from coal washeries, economically recoverable scale etc, the Company set up a full scale magnetite recovery plant at Jaduguda in 1982. The Company failed to benefit from the knowledge and experience gathered over a very long period of time and take prompt decision to invest in the by-product recovery plant at Turamdih in order to reap the maximum possible benefit out of the investment.

Thus, delayed decision to set up the by-product recovery facility at Turamdih led to a loss of ₹ 13.47 crore, which could have been avoided with proper planning.