

# **NEW URANIUM MINING CENTERS IN ANDHRA PRADESH: A PERSPECTIVE**

By  
**RAMENDRA GUPTA**  
Chairman & Managing Director  
**Uranium Corporation of India Ltd.**

Natural uranium is the basic raw material for first phase of India's nuclear power programme. With the formation of Atomic Energy Commission in India in 1948, reconnaissance survey was pursued to locate good deposits of uranium and soon several deposits were identified in Singhbhum belt in Jharkhand. UCIL, a PSU under Department of Atomic Energy is engaged in mining and processing of uranium ore. The company, since its inception in 1967, has been operating in Jharkhand and meeting the requirement of uranium for the nuclear programme of the country.

With the expansion of nuclear power programme and subsequent demand to meet the requirement of uranium, UCIL has a massive expansion plan which includes construction of new uranium mining centers in different parts of the country, apart from the expansion of some operating units in Singhbhum. The new projects are planned in Singhbhum, Andhra Pradesh and Meghalaya and are in different stages of implementation. UCIL is also contemplating new mining centers in the States of Rajasthan and Karnataka.

## **New uranium mining centers in Andhra Pradesh:**

Extensive uranium exploration work being carried out by Atomic Minerals Directorate for Exploration and Research (AMD) in the State of Andhra Pradesh has located several uranium deposits of unconformity proximal, strata bound and fracture controlled type in the Cuddapah basin. Of these, two prominent deposits have emerged for regular mining operations and UCIL has already drawn the plan to start operations in XI plan period.

**Tummalapalle uranium project:** The large uranium reserve discovered at Tummalapalle near Pulivendla in Kadappa district of Andhra Pradesh is hosted by carbonate rock formations. The strata bound ore body extending over a strike length of 6.5km has been delineated up to a depth of 275m continuing like thin veins from surface. The orebody has fairly uniform dip and width. Underground exploratory mining work in

this deposit was completed confirming the configuration of ore body. Ore recovered in the process was utilised in the pilot plant to develop the flowsheet.

The project has got the approval of Govt. of India and site construction activities have already started. (Foundation stone of the project has been laid by Honorable Chief minister of Andhra Pradesh on 20<sup>th</sup> Nov. '07). The project, at an estimated cost of Rs. 1106 crore includes construction of an underground mine (decline entry, conveyor transport system, breast stopping and high degree of mechanisation) with 3000 TPD capacity and a process plant (alkali leaching under pressure) will be completed within three years time.

**Lambapur uranium project:** This project falls in the district of Nalgonda, Andhra Pradesh. It consists of constructing three underground mines and one opencast mine at Lambapur-Peddagattu region, 130km south-west of Hyderabad and a processing plant at Seripalli, 54 km from mine site. The total project cost is Rs. 637 crore for which the fund has already been allocated by Govt. of India in the XI plan period. The MoEF clearance for this project has already been obtained. Unfortunately, the same has been challenged by an NGO in National Environment Appellate Authority. Following the verdict of NEAA in favour of the project and approval of Govt of India, site activities will start soon. The project is expected to be completed within three years time.

**Other uranium deposits:** The ongoing exploration activities has already brought to light several more deposits in Cuddapah basin, specially around Lambapur amongst whom mention may be made of Chitrial, Kuppunur and RV Tanda. Large uranium reserve has already been established around Chitrial which will be amenable to regular mining both by underground and openpit method and the ore will be processed in the plant already planned at Seripally (after expansion). Ore of Kuppunur and RV Tanda (as and when production starts) shall be fed to the expanded plant at Seripally.

Several small deposits around Tumulapalle in similar geological set-up have also been identified. Regular mining operation in some of those deposits will be planned at appropriate time with the expansion of the plant.

**Conclusion:**

Over the years, the mining practices followed by UCIL at its units in Singhbhum have amply demonstrated that uranium mining and environment are not conflicting in nature. Uranium mining has contributed significantly to the development of a tribal belt in east Singhbhum district in Jharkahnd for the past four decades. The mining practices followed by UCIL are comparable with the best practiced anywhere in the world. The industry has amply matured with broader range of knowledge and skills. Development of new uranium mining centers in Andhra Pradesh shall result in significant economic development in and around the area.

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