

## URANIUM CORPORATION OF INDIA LIMITED

### **Status of Environmental Compliance of the Turamdih Mine as on March 2014 (MoEF No. No. J-11015/18/85-Env.5/IA dated 22<sup>nd</sup> September 1987)**

- i. *The people residing in the village to be affected by the mining operation shall be appropriately rehabilitated by providing them houses and land for agriculture as per the Rehabilitated Plan drawn up by the UCIL*

The District Land Acquisition office has declared 292 awards against acquisition of 368 acres land including 40 houses for Turamdih project. An amount of Rs. 58, 74,344 has been paid as compensation and 406 employments have been provided against the above displacement.

- ii. *The waste dumps will be properly sloped, terraced and planted with appropriate tree / vegetation.*

A small waste dump covering an area of 2.7 ha has been earmarked for waste dump site within mine premises. During initial period of mine development, waste rock was transported to the dump. At present entire waste which is generated due to mining activity is being used for void filling in underground. The maximum height of the dump is about 10m. Plantation has been developed around the dump and natural vegetation has come up which has stabilized most of the dump area. Garland drain around the dump area has been constructed to a length of 560 m which finally merged with channel leading to de-silting pond of Banduhurang open cast mine of UCIL.

- iii. *The Mine water will be treated for removal of radium prior to its discharge in the water bodied.*

Mine discharge water is collected in underground sumps and then pumped to Mine Water Treatment Plant for de-silting. The de-silted mine water is partly reused for industrial purpose within mine and excess water is pumped to Turamdih Ore Processing Plant for reuse. No water is discharged to the environment from Turamdih Mine.

- iv. *The township for the employees shall not be constructed in the forest area.*

The township for the employees has not been constructed in the forest area

- v. *The provisions made in the Environmental Management Plan to protect the employees and their families from the radiological effects likely to arise due to this project shall be strictly implemented and regular monitoring of their implementation shall be done.*

Dedicated Health Physics Unit (HPU) of Bhabha Atomic Research Centre (BARC) has been established at Turamdih which carry out regular radiological monitoring in and around the project. Background radiation levels in air, water and soil is done on periodical basis. Radiological analysis of edibles from nearby area and dose assessment of workers & public is carried out on periodical basis. Analysis of 7 ground water samples for the period of March 2013 indicated that U (Nat) and  $^{226}\text{Ra}$  values varies as 0.5 to 1.7  $\mu\text{g/l}$  and 5-70  $\text{mBq/l}$  respectively which are well within permissible limits of drinking water standards (U- 60  $\mu\text{g/l}$  and  $^{226}\text{Ra}$  -300  $\text{mBq/l}$ ).

Facility has been developed at Turamdih for periodical medical check-up for employees. No radiological effects have been observed due to UCIL operations at Turamdih and elsewhere.

- vi. *The various environmental parameters will be regularly monitored during the construction and operational phase of the project.*

The periodic monitoring of environmental parameters is done by the Health Physics Unit of BARC, Government of India and Environmental Engineering Cell of UCIL. Monitoring report of four ground water samples during November 2013 and January 2014 shows that pH, Total Dissolved Solid, Turbidity, Chloride, Sulphate, Total Hardness as  $\text{CaCO}_3$ , Total Alkalinity, Nitrate Nitrogen, Calcium Magnesium, Nitrate and heavy metals (Cu, Fe, Mn, Pb, Zn) are within drinking water standards. Manganese and Iron concentrations are slightly higher in few samples; however values are within permissible limits. Ambient air quality in terms of PM10, PM2.5,  $\text{SO}_2$ ,  $\text{NO}_x$ , Pb and Ni are found within the permissible standards.

- vii. *A periodic report regarding the implementation of various environmental control measures and the monitoring of environmental parameters will be submitted to this department every six months.*

The six monthly compliance status report is sent to the ministry regularly.