

PROPOSED TOR FOR EIA STUDY

Kamarpalli Tin mine situated near Village Kamarpalli under P.S Mathili, Tehsil Malkangiri District Malkangiri in Odisha State. The mining lease area covering 19.0 ha.

The aforesaid mine lease area measuring 19.0 ha is for extraction of Tin ore. The annual production is targeted at 9.0 Million TPA. Open cast semi-mechanized mining method is proposed to be adopted to mine out the minerals. The cost of the project is Rs 80 lakhs.

This mining project falls under Category “A” Project or activity 1(a) as per EIA Notifications 2006 and its subsequent amendment on 14.08.2018.

Proposed Terms of reference (ToR) for conducting environment impact assessment study for this project is following:

1. A copy of the document in support of the fact that the proponent is the rightful lessee of the mine should be provided.
2. All documents including approved mine plan, and EIA will be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and will be provided in the name of the lessee.
3. All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ topo-sheet, topographic sheet, geomorphology and geology of the area should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone). Information should be provided in Survey of India Topo-sheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams, rivers and soil characteristics.
4. Details about the land proposed for mining activities will be provided with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.
5. Issues related to Mine Safety and proposed safeguard measures in each case should also be provided.
6. The study area will be comprised of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc.
7. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features will be indicated. Land use plan of the mine lease area will be prepared to encompass preoperational, operational and post operational phases and then submitted. Impact, if any, about the change of land use should be given.

8. Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, will be given.
9. The vegetation in the RF / PF areas in the study area, with necessary details, should be given.
10. A study shall be done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.
11. Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease will be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden.
12. A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone will be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation will be prepared in consultation with State Forest and Wildlife Department and details furnished.
13. One season (non-monsoon) primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna will be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data will also be collected. The location of the monitoring stations will be kept in such a way that it represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There will be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM₁₀, particularly for free silica, will be provided.
14. Air quality modeling will be carried out for prediction of impact of the project on the air quality of the area. It will also taken into account that the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map, clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction will also be indicated on the map.
15. The water requirement for the Project, its availability and source will be furnished. A detailed water balance will be provided. Fresh water requirement for the Project will be indicated.
16. Description of water conservation measures is proposed to be adopted in the Project will be provided.

17. Impact of the Project on the water quality, both surface and groundwater, will be assessed and necessary safeguard measures, if any required, will be provided.
18. Information on site elevation, working depth, groundwater table etc. will be provided both in AMSL and bgl. A schematic diagram will also be provided for the same.
19. A time bound Progressive Greenbelt Development Plan will be prepared in a tabular form and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation will be charted clearly. The plant species selected for green belt will have greater ecological value and will be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.
20. Impact on local transport infrastructure due to the Project will be indicated.
21. Details of the onsite shelter and facilities to be provided to the mine workers will be included in the EIA Report.
22. Occupational Health impacts of the Project will be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules will be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area will be detailed.
23. Public health implications of the Project and related activities for the population in the impact zone will be systematically evaluated and the proposed remedial measures will be detailed along with budgetary allocations.
24. Measures of socio economic significance and its influence to the local community proposed to be provided by the Project Proponent will be indicated.
25. Detailed environmental management plan (EMP) to mitigate the environmental impacts which, will inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.
26. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP will be clearly spelt out.
27. Benefits of the Project if the Project is implemented will be spelt out. The benefits of the Project will clearly indicate environmental, social, economic, employment potential, etc.

Besides the above, the below mentioned general points will also be followed:-

- a) Executive Summary of the EIA/EMP Report
- b) All documents to be properly referenced with index and continuous page numbering.
- c) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources will be indicated.
- d) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF & CC/NABL accredited laboratories. All the original analysis/testing reports will be available during appraisal of the Project.

e) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) will be brought to the attention of MoEF & CC with reasons for such changes and permission will be sought, as the TOR may also have to be altered.

f) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.
