



State Level Environment Impact Assessment Authority, Jharkhand.

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Letter No.-EC/ SEIAA / 2016-17/1983/2016/ 60

Ranchi, Date: 12.04.2017

To: **Soumitra Singh (HOD (Envt.))**
DGM/HOD (E&F),
Central Coalfields Limited,
Environment & Forest Department,
CCL, Darbhanga House, Ranchi,
Jharkhand-834029.

Sub: Prescribing of ToR to “**Balkudra OCP (1.0 MTPA Normative & 1.3 MTPA Peak) of M/s Central Coalfield Limited at Village- Balkudra, District- Ramgarh, Jharkhand (149.50 Ha)**”- regarding.

Ref: Your application & letter no.- एच० ओ० डी० / (पर्या०) / 2016 / 409 dated- 22.11.2016.

Sir,

Reference is invited to your letter along with the application in the prescribed format (Form-1) and a copy of the pre-feasibility report to prescribe the ToRs for undertaking detailed EIA study for the purpose of obtaining environmental clearance under the provisions of the EIA Notification, 2006 in respect of the above mentioned project.

Balkudra OC is an existing old coal mining project of Central Coal Fields Ltd. The mine was started by Railway from 1924 in the block.

The South Karanpura Coalfield is located in the western part of the Damodar Valley and to the south of North Karanpura Coalfield. The Bhurkunda (SW) block is situated in the south eastern part of the South Karanpura Coalfield and occupies an area 0.60 Sq. km. The Balkudra OC proposed within Bhurkunda (SW) block is under the administrative control of the Barka Sayal Area of CCL. The latitude and longitude of the project site is 23°39'00"N to 23° 41'00" N and 85°21'00"E to 85°23'00"E respectively. Adjoining block situated to the north and east is Bhurkunda. Sauda-D is situated to the north – west corner of the block. The Damodar River and adjoining major nalas are the prime source of water and these constitute the main drainage system of the area. The Kurse nala flowing westerly joins Nakari nala in the north east of the block.

The nearest railway station is Bhurkunda station at a distance of 4 km on Gomoh-Dehri On Sone line via Barkakana loop line of Eastern railway. Ramgarh town is situated at a distance of 16 km from block.

The normative capacity of project is 1.0 MTPA Normative & 1.3 MTPA Peak over a project area of 149.50 Ha.

The balance geological reserve is Sayal – 2.73 Mte, Upper Balkudra- 5.64 Mte and Lower Balkudra- 3.65 Mte grade and proposed mine life is 07 years. Mining will be undertaken by opencast method using shovel dumper combination. The project cost is Rs 5.80 Crores.

SEIAA, Jharkhand has approved the ToRs suggested by SEAC in its meeting held on 16th and 17th January, 2017.

After detailed deliberations, the SEAC prescribed following ToRs for undertaking detailed EIA/EMP study.

1. The EIA Report shall be prepared considering the normative capacity of project is 1.0 MTPA Normative & 1.3 MTPA Peak. It should also address the possible impacts due to other projects in the region.
2. An EIA-EMP Report would be prepared for 1.0 MTPA Normative & 1.3 MTPA Peak rated capacity to cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality encompassing air, water, land, biotic community, etc. through collection of data and information, generation of data on impacts including prediction modelling for 1.0 MTPA Normative & 1.3 MTPA Peak of coal production based on approved project/Mining Plan for 1.0 MTPA Normative & 1.3 MTPA Peak. Baseline data collection can be for any season except monsoon
3. A map specifying locations of the State, District and Project location should be provided.
4. **Status of land as certified by CO and DFO be submitted.**
5. A Study area map of the core zone and 10 km area of the buffer zone (1: 50,000 scale) clearly delineating the major topographical features such as the land use, surface drainage pattern including rivers/streams/nullahs/canals, locations of human habitations, major constructions including railways, roads, pipelines, major industries/mines and other polluting sources. In case of ecologically sensitive areas such as Biosphere Reserves/National Parks/WL Sanctuaries/ Elephant Reserves, forests (Reserved/Protected), migratory corridors of fauna, and areas where endangered fauna and plants of medicinal and economic importance found in the 15 km study area should be given.
6. Land use map (1: 50,000 scale) based on a recent satellite imagery of the study area may also be provided with explanatory note on the land use.
7. Map showing the core zone delineating the agricultural land (irrigated and un-irrigated, uncultivable land as defined in the revenue records, forest areas (as per records), along with other physical features such as water bodies, etc should be furnished.
8. A contour map showing the area drainage of the core zone and 25 km of the study area (where the water courses of the core zone ultimately join the major rivers/streams outside the lease/project area) should also be clearly indicated in the separate map.
9. A detailed Site plan of the mine showing the proposed break-up of the land for mining operations such as the quarry area, OB dumps, green belt, safety zone, buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within and adjacent to the ML), undisturbed area -if any, and landscape features such as existing roads, drains/natural water bodies to be left undisturbed along with any natural drainage adjoining the lease /project areas, and modification thereof in terms of construction of embankments/bunds, proposed diversion/re-channelling of the water courses, etc., approach roads, major haul roads, etc should be indicated.
10. In case of any proposed diversion of nallah/canal/river, the proposed route of diversion /modification of drainage and their realignment, construction of embankment etc. should also

be shown on the map as per the approval of Irrigation and Flood Control Department of the concerned state.

11. Similarly if the project involves diversion of any road/railway line passing through the ML/project area, the proposed route of diversion and its realignment should be shown in the map.
12. Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary and national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated.
13. The vegetation in the RF / PF area with necessary details should be given. Details of Flora and Fauna in the study area is to be included in EIA Report.
14. Break-up of lease/project area as per mining operations should be provided.
15. Impact of changes in the land use due to the project, if much of the land being acquired is predominantly agricultural land/forestland/grazing land.
16. One-season (non-monsoon) primary baseline data on environmental quality - air (PM10, PM2.5, SOx, NOx and heavy metals such as Hg, Pb, Cr, As, etc), noise, water (surface and groundwater), soil - along with one-season met data coinciding with the same season for AAQ collection period should be provided.
17. Map of the study area (1: 50, 000 scale) (core and buffer zone clearly delineating the location of various sampling stations superimposed with location of habitats, other industries/mines, polluting sources should be provided. The number and location of the stations in both core and buffer zones should be selected on the basis of size of lease/project area, the proposed impacts in the downwind (air)/downstream (surface water)/groundwater regime (based on flow). One station should be in the upwind/upstream/non-impact/non-polluting area as a control station. The monitoring should be as per CPCB guidelines and parameters for water testing for both ground water and surface water as per ISI standards and CPCB classification wherever applicable. Values should be provided based on desirable limits.
18. Study on the existing flora and fauna in the study area (10km) should be carried out by an institution of relevant discipline. The list of flora and fauna duly authenticated separately for the core and study area and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna should be given. If the study area has endangered flora fauna and, or if the area is occasionally visited or used as a habitat by Schedule-I fauna, or if the project falls within 15 km of an ecologically sensitive area, or used as a migratory corridor then a Comprehensive Conservation Plan should be prepared and submitted with EIA-EMP Report; and comments from the CWLW of the State Govt. should also be obtained and furnished.
19. Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working scheme until the end of mine life should be provided on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps and sections should be included.
20. Details of mining methods, technology, equipment to be used, etc., rationale for selection of specified technology and equipment proposed to be used vis-à-vis the potential impacts should be provided.
21. Impact of mining on hydrology, modification of natural drainage, diversion and channeling of the existing rivers/water courses flowing through the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
22. Detailed water balance along with flow chart should be provided. The break-up of water requirement for the various mine operations should be given separately.

23. Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users should be given.
24. Impact of mining and water abstraction use in mine on the hydrogeology and groundwater regime within the core zone and 10 km buffer zone including long-term monitoring measures should be provided. Details of rainwater harvesting and measures for recharge of groundwater should be reflected in case there is a declining trend of groundwater availability and/or if the area falls within dark/grey zone.
25. Detailed ground water study of the core and buffer area giving fluctuations season wise of the water levels in various dug wells of the area need be carried out. Also a thorough study of ground water aquifer parameters such as specific yield, transmissivity and draw down characteristics be covered. A detailed statement as regards ground water discharge/dewatering per /day and annum with artificial recharge equal to the yearly discharge from the mine needs to be furnished so that discharge and recharge process happen simultaneously without disturbing ground water regime. A radius of influence be marked to show the impact zone due to mine water discharging.
26. Impact of blasting, noise and vibrations should be given.
27. Impacts of mining on the AAQ and predictions based on modeling using the ISCST-3 (Revised) or latest model should be provided.
28. Impacts of mineral transportation within the mining area and outside the lease/project along with flow-chart indicating the specific areas generating fugitive emissions should be provided. Impacts of transportation, handling, transfer of mineral and waste on air quality, generation of effluents from workshop, management plan for maintenance of HEMM, machinery, equipment should be given. Details of various facilities such as rest areas and canteen for workers and effluents/pollution load emanating from these activities should also be provided.
29. Effort be made to reduce/eliminate road transport of coal inside and outside mine and for mechanized loading of coal through CHP / Silo entirely wagons and into trucks / tippers.
30. Details of waste OB and topsoil generated as per the approved calendar programme, and their management shown in figures as well explanatory notes tables giving progressive development and mine closure plan, green belt development, backfilling programme and conceptual post mining land use should be given. OB dump heights and terracing based on slope stability studies with a max of 28o angle as the ultimate slope should be given. Sections of final dumps (both longitudinal and cross section) with relation to the adjacent area should be shown.
31. Efforts be made for maximizing progressive internal dumping of O.B., sequential mining, external dump on coal bearing area and later re-handling into the mine void.--to reduce land degradation.
32. Impact of change in land use from mining operations and whether the land can be restored to agriculture use post mining.
33. Progressive Green belt and Ecological restoration /afforestation plan (both in text, figures and in the tabular form as per the format of MOEF&CC given below) and selection of species (native) based on original survey/land use should be given.
34. Conceptual Final Mine Closure Plan and post mining land use and restoration of land/habitat to the status of pre- mining should be provided. A Plan for the ecological restoration of the mined out area and post mining land use should be prepared with detailed cost provisions. Impact and management of wastes and issues of re-handling (wherever applicable) and backfilling and progressive mine closure and reclamation should be detailed.

35. As Nakari Nala & Kurse Nala are located towards the lowest contour on the north & east direction of the proposed project site, it is expected to collect (due to passage of storm water during precipitation) loose sediments generated during excavation in mining operation, which , if not adequately arrested, might raise the bed level of River & Nala . For accommodating the flow of the streams (water way), the spread of River & Nala might increase resulting in submergence of larger area in the vicinity.

A study, therefore, is required to be carried out by CCL, considering the existing contour of the area, flow in the streams, cross-section of river & Nala , HFL, River/Nala bank profile etc addressing these aspects & highlighting the proposed remedial measures required to be taken to ensure that the condition of flow is not deteriorated during the entire project period due to excessive sediment transport etc.

All supporting data, drawings (contour plan), dimensioned plan & cross-sections of river & nala etc shall be submitted.

36. "Barrier Walls proposed to be constructed in the project area along the river & nala to contain the high floods , might at the same time put hindrance in free flow of storm water from higher contours of the project area lying on the south of Nakari River & western part of Kurse nala to the streams. This aspect shall be clearly explained in the report & shall be substantiated with schematic sketches , cross sectional detail of barrier gravity wall etc."
37. Treatment of effluents from workshop, township, domestic wastewater, mine water discharge, etc. should be provided. Details of STP in colony and ETP in mine should be given. Recycling of water to the max. possible extent should be accorded?.
38. Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower in the mine should be given.
39. Risk Assessment and Disaster Preparedness and Management Plan should be provided.
40. Integration of the Environmental Management Plan with measures for minimizing use of natural resources - water, land, energy, etc. should be carried out.
41. Cost of EMP (capital and recurring) should be included in the project cost and for progressive and final mine closure plan.
42. Details of R&R. Detailed project specific R&R Plan with data on the existing socio-economic status of the population (including tribals, SC/ST, BPL families) found in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan should be given.
43. CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project should be given.
44. Corporate Environment Responsibility:
- a) The Company must have a well laid down Environment Policy approved by the Board of Directors.
 - b) The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
 - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.



- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- 45. Details on Public Hearing should cover the information relating to notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments made by the proponent and the action proposed with budgets in suitable time frame. These details should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- 46. In built mechanism of self-monitoring of compliance of environmental regulations should be indicated.
- 47. Status of any litigations/ court cases filed/pending on the project should be provided.
- 48. Submission of sample test analysis of Characteristics of coal: This should include details on grade of coal and other characteristics such as ash content, S and heavy metals including levels of Hg, As, Pb, Cr etc.
- 49. Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, mine closer plan approval, NOC from Flood and Irrigation Dept. (if req.), etc. wherever applicable.

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

- a) A note confirming compliance of the TOR, with cross referencing of the relevant sections / pages of the EIA report should be provided.
- b) All documents may 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 should be indicated.
- d) Where the documents provided are in a language other than English, an English translation should be provided.
- e) The Questionnaire for environmental appraisal of mining projects as prescribed by the Ministry shall also be filled and submitted.
- f) Approved mine plan along with copy of the approval letter for the proposed capacity should also be submitted.
- g) While preparing the EIA report, the instructions for the proponents and instructions for the consultants issued by MoEF vide O.M. No. J-11013 /41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry should also be followed.
- h) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the F.R for securing the TOR) should be brought to the attention of SEIAA, Jharkhand with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH process again with the revised documentation.

The EIA report should also include

- 1. surface plan of the area indicating Contours of main topographic features, drainage and mining area.
- 2. geological maps and sections and
- 3. sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

After preparing the draft EIA (as per the generic structure prescribed in Appendix- III of the EIA Notification, 2006) covering the above mentioned issues, the proponent will get the

public hearing conducted and take further necessary action for obtaining environmental clearance in accordance with the procedure prescribed under the EIA Notification, 2006.

The TORs prescribed shall be valid for a period of two years for submission of the EIA/EMP Report as per OM F No. J11013/41/2006-IA-II(I) part dated 22nd August 2014.

Sd/-
Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

Memo No.-EC/SEIAA/2016-17/1983/2016/ 60

Dated: 12.04.2017

Copy to:

1. Member Secretary, Jharkhand State Pollution Control Board, Ranchi.
2. Secretary, SEAC, Jharkhand, Ranchi for information and necessary action.


Member Secretary
State Level Environment Impact
Assessment Authority, Jharkhand.

