

Scrutiny comment on Modification to the approved Mining Plan including PMCP in respect of KHANDBANDH Iron Ore Mine of M/s SMC Power Generation Limited over an area of 178.908 Hectare in Keonjhar district of Odisha State.

Date of Inspection: 16.07.2016

GENERAL:

- (1) The instant document is submitted for the purpose of Modification of approved Mining Plan hence, on cover page instead of "Modification and review of Mining Plan" Modification of Mining Plan to be mentioned.
- (2) Page 10: Figure mentioned for proposed ROM does not match with the figures mentioned in approved Mining Plan document. Verify and rectify.
- (3) Name of the Lessee to be mentioned in para 1.2. further, the status of the lessee, whether, private company, public limited company, partnership firm etc. to be mentioned in same para.
- (4) Status of all statutory clearance obtained or to be obtained should be given in introduction along with documentary proof.
- (5) CCOM circular no.2/2010 and its addendum regarding geo-referenced mining lease map and ML boundary pillars to be implemented.
- (6) Grammatical mistakes are found to exist at many places, which need to be corrected.

GEOLOGY & RESERVES:

- (7) The reserve and resource is not estimated as per as per Minerals (Evidence of Mineral Content) Rule, 2015 dated 17/04/2015, same to be revised considering Minerals (Evidence of Mineral Content) Rule, 2015. Grade of reserve and resource mentioned in page 24 and 25 is not specific. +45% Fe might be considered as 70% Fe. Hence it must be specific.
- (8) The recovery of iron Ore considered in approved MP document dated 01/06/2011 is 80% w.r.t. Ore Zone Excavation, however, same is increased to 90% without any justification. Proper justification of such increment in recovery to be given.
- (9) A summary of lease area explored as per UNFC norms indicating G1, G2, etc. should be given in the following format and area explored under G1, G2 etc. to mark on relevant plan:

Item of information	Lease area explored as per UNFC norms (in Ha) as on dt.					Remarks/Comments including reasons for not carrying out the exploration as per UNFC norms.
	Total Lease area = A+B+C+D+E					
	G1 Level	G2 Level	G3 Level	Explored and found non-mineralized with level of exploration (Remarks)	Unexplored lease area	
	A	B	C	D	E	
Area as per level of exploration						
No. of BH Drilled						
No. of BH considered for Resource Estimation.						
Meterage Drilled						
Grid Interval						
Scale of Mapping						

MINING:

- (10) Location of mine workings proposed has not been referred by grid lines in text part of documents.

- (11) It is observed that Quarry-2 is proposed in float Iron Ore Zone and some part of the quarry will be exhausted within 1 or 2 years, hence, proposal of concurrent reclamation and rehabilitation of quarry-2 may be given.
- (12) It is observed that proposed site for waste dump, mineral stack, etc. are not explored. Hence, proposal of exploration in these areas may be given in the first year of plan period and such area should be brought into use after proving non-mineralized. (to be mentioned in text part of the document).
- (13) Conceptual Mine plan should be upto the end of life of mine taking into consideration of the available reserve and resources describing the total excavation, Disposal of waste, Sub-grade generation and its beneficiation/utilization, mine development, manpower and equipment requirement, conceptual exploration, land degradation, waste required and its availability for back filling the ultimate pit, reclamation and rehabilitation, Proposal of any expansion, etc. showing on a plan with few relevant sections.
- (14) **Mine Drainage:** A drainage plan may be submitted showing the drainage pattern of the lease area and final discharge point of surface water during rainy season.

STACKING OF MINERAL REJECT/SUB GRADE AND DISPOSAL OF WASTE:

- (15) Build-up of dumps from year to year to be mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slop, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned.
- (16) Proposal of blending of Sub-grade may be given in the interest of conservation of Mineral. Blending ratio also should be mentioned.
- (17) The disposal of sub-grade material is not clear. This should be clarified. Further, year to year buildup of Sub-grade dump may be mentioned in text.
- (18) It seems that the retaining wall, garland drain and settling tank etc. proposed around waste dump, Sub-grade dump, mineral stack etc. are inadequate. Proposal of same may be revised.

PROCESSING OF ROM AND MINERAL REJECT:

- (19) The approximate grade of final product and reject from crushing and screen plant to be mentioned in text as well as in flow sheet at each stage of processing.

PROGRESSIVE MINE CLOSURE PLAN

- (20) Proposed location of plantation may be mentioned in table presented on page number 82.
- (21) Page No 71: In land use table an area of 1.774 hectare has shown in Mineral Storage, however, no such area has been observed during field visit. Verify and rectify.

FEASIBILITY STUDY REPORT:

- (22) Proposed and actual capital expenditure to be given in separate table. Further, exploration cost to be incorporated in calculation of cost of production of Iron Ore.

PLATES:

- (23) **General:** All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist as per provisions of Rule 30 of MCDR, 1988 and Rule 66 of MMR, 1961.
- (24) It is observed that some of the plan has been submitted on a scale of 1:4000, instead of 1:2000 as prescribed in MCDR, 1988. All the plans to be submitted on a scale of 1:2000.
- (25) Color code given for different features in plans and sections to be same.

- (26) **Surface Plan: The outline of** pit-1 as shown on surface plan and in filed not matched with each other. Needs to be rectified. Same may also be verified for other pits as shown on surface plan.
- (27) All the existing features like roads etc. are not shown on the surface plan. Verify and rectify.
- (28) All boundary pillars coordinates in UTM, Latitude and longitude to be shown on surface plan as well in the text.
- (29) **Geological Plan & Section:** Direction along which geological section have been drawn to be depicted on the sections. The color code/hatching used to display various lithology are not distinguishable, need to be reviewed.
- (30) N-S grid line to be mark on Geological Sections.
- (31) Data related to strike, dip, dip-direction etc. shown on the geological plans are inadequate. Some more data may be shown to understand the geology of the area.
- (32) **Development plan:** Development section to be prepared parallel to geological sections.
- (33) Proposal of retaining wall, garland drain and settling tank as envisaged and presented on page 84 to be shown year wise on relevant plan.

ENCLOSURE

- (34) Photo id proof submitted of nominated owner is obscure, a legible copy of same to be submitted. Further, proof in respect of address and signature of nominated owner to be submitted.
 - (35) Few recent Chemical analysis of Iron Ore of lease area (float and in-situ with location) may be submitted.
 - (36) Copy of the MOU, signed with state Govt. to be annexed.
 - (37) Annexure as mentioned on page number 1 is not submitted in respect of Govt. of India Letter no dated 18.11.2015. to be submitted.
 - (38) Details like Name, residential and correspondence address, email address, contact number etc. of all the Directors of the company to be submitted along with an undertaking from directors/partners regarding there working/interest in other firms/company/Organization etc.
 - (39) Copy of surveyor certificate may be enclosed.
- In view of above, wherever necessary correction required to be made.

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