



भारत सरकार GOVERNMENT OF INDIA
खान मंत्रालय MINISTRY OF MINES
भारतीय खान ब्यूरो INDIAN BUREAU OF MINES
क्षेत्रीय खान नियंत्रक के कार्यालय
OFFICE OF THE REGIONAL CONTROLLER OF MINES



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BHUBANESWAR-751020

No. MP/A/02-ORI/BHU/2020-21

दिनांक / Date: 18.05.2020

To

Shri Shri Manoj Kumar Rustagi,
Director & Nominated Owner,
M/s Shiva Cement Ltd, Plot No. YY-5,
Civil Township, Rourkela, Odisha-769004..

Sub: Scrutiny of Mining Plan along with Progressive Mine Closure Plan under Rule 13 of MCR'2016 of Khatkurbahal (North) Limestone Block of M/s Shiva Cement Ltd over an area of 156.43 ha in Sundargarh district of Odisha..

Ref: - i) Your letter no. RSPL/ED/GEO/2019-20/1141 dated 11.03.2020 received on 16.03.2020.
ii) This office letter of even no. dated 16.03.2020.
iii) This office letter of even no. dated 16.03.2020 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

Sir,

This has reference to the letters cited above on the subject. The draft Mining Plan along with Progressive Mine Closure Plan has been examined in this office based on records as submitted in the draft document by Shri Dayanand Upadhyay, Sr. Assistant Controller of Mines as the site inspection couldn't be under taken due to lock down for COVID-19. The deficiencies observed are enclosed herewith as Annexure-I.

You are advised to carry out the necessary modifications in the draft Mining Plan in the light of the contents vide Annexure-I and submit **three (3) firm bound and two (2) soft copies of the document text in CD in a single MS Word file (the drawing/plates should be submitted in Auto CAD compatible format and JPG format in resolution of 100x100 pixels on same CD)** within 15 (fifteen) days from the date of issue of this letter for further necessary action. If the total page of annexures exceeds 50 (Fifty) then it should be submitted as separate volume. But reference of these annexures must appear in the Mining Plan document. The plates are also to be submitted in separate volume.

The para-wise clarifications and the manner in which the deficiencies are attended should invariably be given while forwarding the modified copies of the Mining Plan. The deficiencies/ discrepancies to be observed if any during the inspection will be communicated which should be rectified in the Mining Plan. It may be noted that no extension of time in this regard will be entertained and the Mining Plan will be considered for rejection if not submitted within above due date. It may also be noted that if the deficiencies are not attended completely, the submission would be liable for rejection without further correspondence.

भवदीय / yours faithfully,

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(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional Controller of Mines

Copy for kind information and necessary action to:

1. The Controller of Mines (EZ), Indian Bureau of Mines, CP-13, Sector V Salt Lake City, Kolkata- 700091
2. Shri S C Nayak, Metch Mining Engg Qualified Person, Flat No 205, Bhagwan Tower, Cuttack Road, Bhubaneswar , Odisha-751006.

o/c

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(HARKESH MEENA)

କ୍ଷେତ୍ରୀୟ ଖାନ ନିୟନ୍ତ୍ରକ / Regional Controller of Mines

Scrutiny comment of Mining Plan including PMCP in respect of Khatkurbahal (North) limestone block, Area-156.43 ha of M/s Shiva Cement Ltd, District-Sundargarh

GENERAL:

1. On cover page 'Mining Plan' submitted under rule 13 of MCR, 2016 should be furnished. E-mail, phone & fax no. of lessee, location of mines i.e village, tehsil, district etc to be furnished on cover page.
2. In introduction chapter, the mining lease to be granted to end use for their cement plant therefore location of plant and its capacity with correlation of proposed production should be furnished. The proposed EC capacity, consent to operate, surface right etc should be described with documentary evidence and marked in annexure.
3. Page-2, it is mention that feasibility report has been prepared however in annexure pre- feasibility report has been enclosed. It may be re-checked and corrected. In pre- feasibility report, final price offer to percentage of mineral dispatched by preferred bidder may considered for economic evaluation of project.
4. Page-3, in name and address of the lessee the name of nominated owner of the company should also be furnished.
5. Page-4, Para-(d) & (e), Letter of Intent issued by State Govt. vide letter no. 9010/D&M, Bhubaneswar, dated 18/11/2019 for limestone ore. However under para "Lessee intends to mine" it is mentioned that the mineral dolomite and clay (raw mix for clinkerization) will be mined out simultaneously with limestone as per geological report. Since Letter of Intent issued by State Govt. for limestone ore therefore instant document will be processed for limestone ore only.
6. In Geological Report the lease area is furnished 156.012 ha while Letter of Intent issued by State Govt. vide letter no. 9010/D&M, Bhubaneswar, dated 18/11/2019 the lease area is furnished 156.43 ha. It may be clarified with documentary evidence. The authenticated lease plan has not been submitted with the instant document.
7. The DGPS plan submitted with instant document has not been signed by authorized agency and also not been verified by State Govt. The CCOM circular no. 2/2010 and its addendum should be implemented.
8. Sequence of paragraph, formats and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings, formats as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
9. The experience of qualified person should be clearly stated in supervisory capacity in the field of mining as per provision of rule 15(b) of Minerals (Other than Atomic and Hydro Carbons of Energy Minerals) Concession Rules, 2016.
10. The updated list of all the directors to be enclosed and same to be given in the text. The latest copy of board resolution about nominated owner to be enclosed.
11. The complete Geological Report including plates and annexure has not been submitted, it should be submitted with separate annexure. The term and condition issued by State Govt. for captive/end use purpose should be described in text and relevant document with copy of tender document are to be enclosed in annexure. The details of installment of upfront payment and performance security paid by lessee should be furnished in annexure. All the annexures are to be properly indexed and signed by qualified person.

GEOLOGY AND EXPLORATION:

12. Page-10 & 11, Para-(b) & (c), the description of regional geology and local geology of the lease area should be furnished in the light of geological report as furnished by state govt.

13. The lithology shown in the borehole log should match with the lithology shown in geological plan and sections. The strike, dip, dip-direction should be shown in bold color in geological plan.
14. Page-14, the details of exploration carried out to be given in tabulated form i.e. year, BH number, Location (Coordinate), nature of BH (Core/DTH), Depth (max-Min), mineralized/non-mineralized, Inclination etc.
15. In page 16, Para (iii), the details of the sample analysis indicating type of sample should be given in tabulated format and nos. of sample analysis from NABL/Govt. lab out of total sample should be furnished alongwith annexure.
16. Page-17, Para-(i), the complete lease area should be proposed to cover under exploration under G1 level upto end of mineralization as per provision of rule 12(4) of MCDR,2017. The year wise proposal for drilling to be shown in different contrasting color in both Geological Plan and Geological sections.
17. The proposal of exploration to be given in following format:

Year	BH no.	Northing	Easting	Collar RL	Core/DTH	Meterage	Inclination	Forest/Diversified forest/non fores	Surface right/non surface right	Purpose of bore holes

18. Page-18, Under column-B, the area explored under G2 level and under column-D, explored non mineralized area should be furnished. Page-19, Para-K, the threshold value of limestone as furnished is not correct. It should be corrected in all places.
19. Page-20, Para-l, as per geological report, resources have been derived by three method i.e bore holes influence method, cross-sectional area method and Geo-statistical method. Therefore resources estimated by all three methods should be furnished in text then after resources estimated by cross-sectional area method should be depicted for further assessment of mineable reserve as per IBM Manual Appraisal MP 2014
20. The UNFC boundaries as per the present status of exploration under MEMC rules 2015 should be demarcated over the Geological Plan and Sections. Number of bores holes considered for reserves/resource estimation should be furnished.
21. In page-.21, the method of reserve estimation may be further elaborated and justified with supporting documents w.r.t recovery factor, Bulk density and, Length of influence considered, cut-off grade etc. Necessary supporting documents to be furnished with respect to bulk density and recovery factor considered.
22. Page-27-32, the reserve and resources as depicted in tables are not furnished with UNFC codes as per Minerals Evidence of Mineral Contents Rules 2015. The justification of UNFC should be described properly. The mineable reserve should be modified revising the UPL considering the safety zone along the road.

MINING:

23. Proposed method of mining should be furnished in light of development proposal i.e annual production capacity, nos. of pits proposed for production, site of waste dump and other designing parameters.
24. Justification of site selection proposed for mining has not been furnished with respect to advancement pit, targeted quantity and grade, in view of scientific mining.
25. In insitu tentative excavation production, limestone and dolomite has been proposed. While Letter of Intent issued by State Govt. vide letter no. 9010/D&M, Bhubaneswar, dated 18/11/2019 is only for limestone ore. Therefore proposal of insitu tentative excavation is permissible for limestone only.
26. Page-34, Para-(b), recovery of usable and mineral reject should be furnished considering the delineation of bore holes data. The grade of bendable limestone and dolomitic lime stone should be furnished.
27. Page-35, annual production of proposed ROM should be furnished with considering the quantity of mineral reject. The proposed ROM production should be justified with plant capacity.
28. The stripping ratio furnished in insitu tentative excavation is 1:0.32 while in geological report stripping ratio is furnished 1:1.21. It may be clarified.
29. It is mentioned that mining will be started without maintaining 7.5m safety zone as the adjacent lease is of same company. In view of above common boundary is not permissible unless modalities of work of

common boundary, a common boundary development plan and sections year wise of both the leases and proposed insitu excavation from common boundary have not been furnished separately. Statutory clearance to be obtained from concern authority has also been not described in text.

30. Page-39, it is mentioned that process ore from screening and crushing will be dispatched to captive plant of lessee and sold to other cement plant. Since the ML is to be granted for end use to its cement plant it may be corrected accordingly.
31. Year wise development and production plan should be furnished in the following tabulated format:

Particular for the year...		
Bench Geometry	Height (in m)	
	Width (in m)	
	Individual bench slope angle	
Quarry Development	Location (Quarry Name)	
	Extent of Development (coordinates)	
	Sections considered for development	
	Number of benches	
	Benches considered for development with RL	
	Top RL	
	Bottom RL	
	Direction of advancement	
	Dimension of the quarry at the end of the year including existing benches	
	Area occupied (in sq.m)	
	Overall quarry slope angle	
	Production of Ore (in MT)	
	Generation of Mineral rejects ore from quarry (in MT)	
Production of ROM (Ore + Mineral Reject) in MT		
Total Generation of waste (in cum)		

32. Page-40, explosive and blasting as described should be considered practical parameters applicable at mines, the storage of explosive is to be elaborated with location of magazine, its capacity and type of explosive is to be used.
33. Page 43, briefly the layout of mine workings, pit road layout, the layout of faces and sites for disposal of overburden/waste along with ground preparation prior to disposal of waste, reject etc. The layout of faces to be shown in the following tabulated format.

Name of Pit	Description	1st Year	2nd year'	3rd year	4th Year	5th Year
	Face RL					
	Length of Face					
	Direction of advancement					
	Length of advancement					

34. The UPL has not been defined considering the safety zone along the road. Therefore UPL has been revised and development plan modified accordingly.

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

35. Page-57, the nature and quantity of top soil, OB/waste and mineral reject generated year wise to be described and information to be provided in the table as below.

Year	Top Soil (cum)		Overburden		Mineral Rejects	
	Reuse/spreading	Storage	Backfilling	Storage	Blending	Storage

36. It should be ensured that the area proposed dumping should be proved non-mineralized. The proposed location of mineral reject should be furnished with terraces to minimize the land degradation.

37. The extent/location of the proposed dumps should be furnished in table with co-ordinates. It is also mentioned that whether proposed dumps are within UPL or outside the UPL.
38. Details of proposed retaining wall, garland drain, settling tank etc. to be given yearwise with their location. The proposal of dumping may be given in tabulate format as shown below. The year wise build up of dump should be described in details.

year	Waste to be dumped	Dump No	Location of Dumping (Grid)	Proposed area	Proposed dumping RL	No of terrace proposed	Individual terrace height	Slope of the terrace

USE OF MINERAL AND MINERAL REJECTS:

39. Requirement of end use industry specifically in terms of physical and chemical composition have not been furnished correctly. Specification should be furnished in light of utilization material for end use of its cement plant.

PROGRESSIVE MINE CLOSURE PLAN:

40. Page-73, Para-8.1, the baseline information should be described properly incorporating buffer zone of the lease area.
41. Page-79-81, monitoring station of air, noise and water should be described in text and their locations furnished in tabular form.
42. Page-85, Para-8.3.2, it is mentioned that top soil generated during mining will be utilized for safety zone plantation however in chapter disposal of waste it is proposed for storage. It may be re-checked and rectified. A temporary storage of top soil may be proposed.
43. Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are not given properly. The same to be elaborated.
44. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished. Matured area of backfilling and dump slope should be stabilized with plantation.

PLATES (GENERAL):

1. Magnetic Meridian and date of observation should be given on all relevant plans. Date of survey should be given on all plans and sections and signature should bear date of signature. All plans & sections prepared should follow the conventions mentioned under MMR 1961. All plans and sections shall show a scale a scale of the plan at least twenty five centimeters long and suitably subdivided. The plans and sections submitted should bear the certificate that - the plans and sections are prepared based on the lease map authenticated by the state government. Wind rose diagram should be furnished in Key plan and environment plan.
2. **SURFACE PLAN:** Few pillars may be correlated with some permanent ground features giving distance and direction. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.
3. **GEOLOGICAL PLAN & SECTION:** Data related to strike, dip, dip-direction etc. shown on the geological plan clearly. The Proposed bore holes with their depth should be marked in sections. Projected bore holes is to be denoted by (P) for better understanding. Geological Plan and Geological section should be followed same color codes. UPL should be drawn correctly prevailed on mineralization.
4. **DEVELOPMENT PLAN & SECTION:** UPL has not been correctly drawn considering the safety zone of existing road. The proposed bench mRL to be shown clearly over year wise development plan and sections. Geological information (lithology) to be furnished on development plan and sections.
5. **RECLAMATION PLAN:** Proposed protective measures and plantation should be shown in different colors. The layout of pit as shown in development is not matched with reclamation plan. It may be re-checked and corrected.