



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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No. MPM/FM/34-ORI/BHU/2018-19

Date: 18.03.2019

सेवामे

✓ Shri Neeraj Akhoury, Managing Director & Nominated Owner,
Dungri Limestone Quarry,
M/s ACC Ltd, P.o – D.L.Q,
Colony Campus, Dist – Bargarh,
Odisha - 768052.

विषय: Approval of modification of Mining Plan of Dunguri Limestone Mine along with Progressive Mine Closure Plan (PMCP), over an area of 428.906 ha in Bargarh district of Odisha State, submitted by M/s ACC Ltd under Rule 17 of MCDR, 2017.

संदर्भ: - i) Your letter No. Nil dated 18.02.2019 received on 04.03.2019.
ii) This office letter of even no. dated 04.03.2019.
iii) This office letter of even no. dated 04.03.2019 addressed to the Director of Mines, Govt. of Odisha, copy endorsed to you.

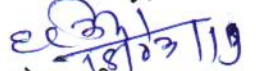
महोदय,

This has reference to the letter cited above on the subject. The draft modification of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on earlier site inspection carried out on 17.12.2018 by Shri Dayanand Upadhyay, Sr. Assistant Controller of Mines. The deficiencies observed are enclosed herewith as Annexure I.

You are advised to carry out the necessary modifications in the draft modification of Mining Plan in the light of the contents vide Annexure 1 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 or JPG format in resolution of 100x100 pixels on same CD)** with financial assurance under Rule 27 of MCDR 2017 of the Modification of Mining Plan 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 modification of 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 modification of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the modification of 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.

Yours faithfully,


(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Pravaranjan Mishra, Earth & Environment, Chandralok Market Complex, Niladri Vihar, Chandrasekharpur, Bhubaneswar - 751021.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

Scrutiny comment on Modification of Mining Plan in respect of Dungri Limestone mines, 428.906 ha of M/s Bargarh Cement Works of ACC Ltd in Bargarh district of Odisha State.

GENERAL:

- I. On cover page the name of lessee is furnished M/s ACC Ltd while in lease deed it is mentioned M/s Bargarh Cement Works of ACC Ltd. It should re-check and rectified accordingly at all places of the text.
- II. Lease no., break up lease area of forest and non-forest & fax no. etc should be furnished on cover page.
- III. In introduction chapter brief history of mines in chronicle order including lease transfer and surrender of part area of the mines, forest clearance, consent to operate, surface right etc should be described with documentary evidence with marked in annexure.
- IV. Page-8, Para-3.2, reason of last modification has not been furnished. Review of approved mining plan, information furnished under Para-3.3.2, table no.-2 & table no.-7 are not matched with proposal of approved modification of mining plan. Para-3.4, status of compliance of violation pointed out by IBM has not been furnished.
- V. The CCOM circular no.2/2010 and its addendum should be implemented.
- VI. All the annexure to be properly indexed/ numbered/ paged and signed by qualified person. All the certificates should bear dated signature.

GEOLOGY:

- I. Page-16, topography considering highest and lowest altitude, drainage pattern, vegetation, climate, rainfall data of the lease area should be described in brief.
- II. Page-20, Para(e)(ii), the details of exploration carried since inception of mining operation till 2017 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. The relevant forms for intimation of borehole and borehole logs to be submitted as annexures.
- III. Page 23, Para-(i), it is mentioned that total lease area explored under G1 level however as it has been observed that the part of the lease area explored is not qualified under G1 level of exploration as per Minerals (Evidence of Mineral Contents) Rules, 2015. Therefore further exploration proposal should be furnished at regular grid interval. All the drilled and proposed BH to be depicted on the Geological section along with RL and its actual and proposed depth for better referencing.
- IV. Copy of form I and J as per MCDR, 2017 to be enclosed for all the drilled BH for ready and future reference as per Rule 47 and 48 of MCDR, 2017 and the same should be signed by the Geologist appointed under MCDR, 2017. Litho units as depicted in geological plan & section should be matched with the bore hole logs.
- V. Page-25, Para-(f), costing should be described in brief. Page no. 27-32 is concerned about IRR, NPV and sensitivity analysis therefore it may replace in feasibility report.
- VI. Page-33, Para-(d), the forest area of 19.50 ha is already surrendered, therefore it needs not to describe while considering the reserve/resource estimation.
- VII. The Geological boundaries of exploration limit i.e. G1/G2/G3 etc. are not marked as per Minerals Evidence of Mineral Contents Rules 2015. Table-36, the level of exploration of non-mineralized area has not been furnished.
- VIII. Page 34-42, the reserve and resources as furnished in tabular form are not in chronicle order. The Geological reserve should be converted into mineable reserve after depletion of blocked mineral resources then mineable reserve should be derived with saleable and sub grade mineral. The calculation of reserves/resources under different categories of UNFC not matched final presentation of reserves/resources furnished at table no. 35(c), page-43 and also not matched with geological plan and section.

- IX. The blocked mineral resources should be considered under 211 category. The nos. of cross-section considered for reserve/resource estimation should be furnished clearly with its nomenclature. The calculation of total volume as furnished in tabular form should be furnished with excavation of overburden considering the cross-sectional area.
- X. Reporting of Mineral Resources in the format prescribed in Part IV-A of Minerals (Evidence of Mineral Contents) Rules, 2015 to be submitted.

MINING:

- I. The modification of mining plan has been submitted for the year 2018-19 & 2019-20. Since the financial year 2018-19 is going to expire hence it is not justifiable. Therefore proposal for only 2019-20 should be furnished.
- II. Page-45, to separate the clay mix material from limestone 200TPH mobile screen plant is proposed however in calculation 100TPH mobile screen is mentioned. The location of the screen plant is not marked in development plan and flow chart has not been discussed.
- III. Page-49, table no.-40, The dimension of existing pit/block should furnished in following table.:

Name of pit/Block	Location	Length	Breadth	Depth	Top mRL	Bottom mRL	No. of benches in ore/No. of benches in OB	Pit slope	Area backfilled	Area reclaimed & rehabilitated

- IV. Page-49 & 50, in the text and table, the low grade/sub grade ore should be replaced with mineral reject with grade. The details of mineral reject and waste dumps as furnished in table should be referred with location.
- V. Page-50, Para-(b), Table no. 42, 43 & 44 volume of excavation of ore as furnished in not matched with the quantity of high limestone, medium grade limestone and sub grade limestone as furnished in table.
- VI. Yearwise tentative excavation quantity of top soil and overburden have not calculated considering the cross sections as proposed.
- VII. Page-51, in summary of production & waste the stripping ratio is not clearly furnished. Different types ore like high grade, medium grade & mineral reject should be furnished with percentage of mineral content.
- VIII. In the table no.-45 quarry 5 & 6 have been proposed for excavation however in development plan and calculation of tentative excavation only quarry no.-6 is considered for ROM production. It should be rechecked and rectified.
- IX. Page-53, Table-47, yearwise development the top and bottom RL of quarry as furnished is not matched with development plan.
- X. Page-54 & 56, Para- (d), (e) & (iv), back filling proposal has not been explained properly. It should be insured that sequence of backfilling should be same as per original sequence of the litho units occurring in lease area. Exhausted area to be backfilled specified with RL and year to year basis.
- XI. Before backfilling of the quarry as proposed it should be ensured the exhaustion of ore body in terms of their depth & extension in the interest of mineral conservation.
- XII. Page-55, Table no.-49, the ROM production considered in coloumn-c for high grade and medium grade limestone only and sub grade is not included. It is to be rechecked and rectified.
- XIII. Page-57, Table no.52, reclamation and rehabilitation of for the year 2016-17 to 2018-19 are furnished nil. However it has been observed during inspection that reclamation and rehabilitation of mined out area has been carried by lessee during that period. Particulars of table should be clearly mentioned.

- XIV. Conceptual mining plan, cumulative waste generation and protective measures should be furnished properly. Restoration of safety zone, stabilization of dead dump and slope of the dump may describe properly.

Mine Drainage:

It has been observed that a substantial amount of rain water supposed to be passed from the lease area. Hence, a mine drainage plan to be submitted showing flow direction of the water, location final discharge, arrangement of arresting of solid waste etc.

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

- I. Page-77, Table no.-60 & 61, location of existing dumps should be furnished. The types of dump i.e active /dead dumps and stabilized dumps should be furnished in details.
- II. Page-78, The location of dumping proposal of mineral reject generated during mining and backfilling area should be furnished with grid location.
- III. The details of mineral reject dumps and their analysis report should be submitted and discussed for their future use on the basis of their physical and chemical properties.
- IV. Page-85, details Existing and proposed retaining wall, garland drain, settling tank etc. to be given yearwise with their location.
- V. The site of temporary storage of top soil and Sub grade/mineral stack should be proposed with retaining wall and garland drain

PROGRESSIVE MINE CLOSURE PLAN:

- I. Page-87, Para-8.1.1, in existing land use pattern the area furnished under reclamation and rehabilitation is not correct and not matched with reclamation plan.
- II. Page-97, Para-8.3, back filling proposal has not been explained properly. Exhausted area to be backfilled by OB/Waste to be specified with mRL and area on year to year basis with description of the method & manner of disposal of waste.
- III. Para-8.3.1, The proposal to be implemented for reclamation and rehabilitation of mined out land should furnished as below:

Summary of reclamation & rehabilitation:

Total area covered under pits as on date	Mined out area reclaimed & rehabilitated as on date	Mined out area proposed for reclamation & rehabilitation in 2019-20	Mode of reclamation & rehabilitation	Remarks

Proposal for reclamation & rehabilitation:

Year	Item	Area proposed for Backfilling in ha.	Area proposed for reclamation & rehabilitation in ha.	Location	Mode of reclamation & rehabilitation	Nos. of plantation proposed	Garland drain, retaining wall, settling ponds, check dam etc	Remarks
	Pits Dumps Others							

- IV. Page-109, Para-8.6, in FA table area considered as fully reclaimed and rehabilitated under dump is not correctly furnished. It should be rechecked and amount of financial assurance should be calculated accordingly as per rule 27(1) of MCDR-2017.
- V. Year wise plantation covering number of saplings to be planted, location and area covered may be furnished.

- VI. Updated air, water, noise, ground vibration and soil data with analysis from laboratory done at specified periodicity for last one year to be enclosed.
- VII. Under impact on land, cumulative land degradation at present, at the end of proposal period and at the end of conceptual period may be given referring to conceptual mining plan given in scheme of mining.

PLATES (General):

- I. All plans and sections shall show a scale of the plan at least twenty five centimeters long and suitably subdivided. All plans & sections prepared shall follow the sign conventions under MMR 1961.
- II. Magnetic declination and date of observation, wind rose diagram in key plan and environmental plan should be furnished.
- III. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager and Mining Geologist. Magnetic Meridian and date of observation of should be furnished on all relevant plans. The UPL should be shown in red colour in all relevant plans and sections.

Surface Plan: Updated surface plan to be submitted. Virgin area to be shown by contours and spot RL in surface plan. Forest & Non forest area, Surface right acquired area etc. should be marked clearly.

Geological Plan & Section: The geo-structural information like strike, dip, dip-direction etc to be shown clearly. Different level of exploration like G1, G2, G3 etc in line with MEMC rule 2015 to be depicted on geological plan and UNFC codes should clearly furnished in sections. The index of Geological features should be same in both Geological Plan and Geological sections. Some of the index is missing in plan and section. All the existing and proposed should be shown in section and all the section should be matched with bore hole logs. The grid lines should be drawn at 100m grid interval and its nomenclature clearly specify. The grid value as marked in section is not matched with plan.

Development plan & Section: The RL of proposed and existing benches not marked clearly. The existing reclaimed and rehabilitated area to be shown with spot RL. The sections of backfilled area year to year basis with RL in different colour codes have not been furnished. The grid value as marked in section is not matched with plan. Some of the index is missing in plan and section. Location of screen plant and temporary stack of top soil should be shown.

Reclamation Plan: Year wise proposal of backfilling, top soil storage, mineral storage, retaining wall and garland drain and afforestation using different colour codes for easy understanding should be furnished. Location of screen plant and temporary stack of top soil should be shown.

Environment plan: The Environment Plan as prepared should be satisfy the provision as laid down rule 32(5) (b) of MCDR2017. Environment Plan, natural drainage systems such as water course, streams, nalla, river, Forest with tree density, waste land, agricultural land, grazing land and surface features of 500 buffer zone should be shown.

Conceptual plan: Conceptual plan and section should be prepared up to the end of lease period taking into consideration the production of ROM, Disposal of waste, backfilling of voids, reclamation and rehabilitation etc. One longitudinal section may also be submitted.

FA Plan: Land degradation due to mining activity and processing unit etc. at the end of plan period may be shown separately on this plan with highlighted boundaries and different colour codes for FA calculation.