



GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

Office of the Regional Controller of Mines

No. AP/KNL/MP/Lst-32/Hyd

Room No.603, 6th Floor,
CGO Towers,Kavadiiguda,
Secunderabad.-500080.
Date: 9-4-2018.

To
Shri P Ramakrishna Rao,
Nominated Owner,
M/s Hemadri Cements Limited
Vedadri Village,
Jaggayyapeta Mandal,
Krishna District,
A.P.-508 246.

Sub: Submission of Review of Mining Plan in respect of Sri Venkateswara Limestone Mine of M/s Hemadri Cement Limited over an extent of 38.45 Ha. located in Vedadri Village, Jaggayyapeta Mandal, Krishna District of AP State submitted under Rule 17(2) of MCR, 2016.

Ref: Your letter no. Hc//Mines/IBM-MP/HL/M/2017/813, dated.12.03.2018.

Sir,

With reference to your letter cited above on the subject, the scrutiny of the draft Review of Mining Plan has since been examined and found certain deficiencies as given in Annexure. The same scrutiny comments have already been forwarded on e mail id of you and your Qualified Person as submitted in the document hemadricements.limited@gmail.com & earth_environment2008@yahoo.com

02. You are advised to attend the deficiencies as per the annexure and resubmit the document, complete in all respects, in Three final bound copies along with soft copy in the form of CD (2Nos) within 15 (fifteen) days from the date of issue of this letter, failing which the document will be disposed without giving any further opportunity.

03. The para-wise clarification & the manner in which the deficiencies are attended should be given while forwarding modified document.

Yours faithfully,

(Pankaj Kulkarni)
Controller of Mines

Copy to Shri P.R.Mishra, Qualified person for informantor. & necessary action.

Encl: a/a

(Pankaj Kulkarni)
Controller of Mines

मूल प्रति पर नही
खान निबंधक (दा), भारतीय खान ब्यूरो, बंगलुरु।

(Pankaj Kulkarni)
खान निबंधक

- 1 -

Inspection report cum Scrutiny comments on the review of mining plan of Sri Venkateswara Limestone Mine of M/s Hemadri Cements Limited at Vedadri village, Jaggayyapeta Mandal, Krishna District, Andhra Pradesh over an extent of 38.46 hectare

As per the last approved mining plan document the lease is having common boundary joined by BP No-01 and BP-02 with Hemadri Limestone Mine of M/s Hemadri Cements Limited. But in this submission the lease sketch submitted is showing no common boundary but only a common boundary pillar no-01 based on the DGPS survey carried out and informed that the Lease sketch authentication is due at State DMG office. The mining activity has been extended in the South of boundary joined by BP-01 and 02. Further the shape of the precise mining lease area as per the earlier approved mining plan and current submission is not matching. The lease sketch authenticated by competent authority of state government has not been submitted along with the original lease sketch at the time of grant for verification by this office.

1. General

- a) Introduction chapter should be redrafted mentioning all the issues related to grant, renewal, execution, transfer, Plant & EC capacity and limestone requirement with proper annexing of related documents. GO / proceedings for extension of lease period upto 31.03.2030 be annexed.
- b) The mining proposal document submitted is not as per the guidelines. So the review of mining plan should be prepared and submitted as per the guidelines issued by IBM on this behalf.
- c) List of board of directors enclosed does not contain the name of Shri P.Rama Krishna Rao, who has signed the document. Further the board resolution in respect of nominated owner has not been enclosed. Thus the consent letter of the Nominated owner is not acceptable. Further the name, email id, mobile no, phone and fax no of the nominated owner be mentioned in the text in General chapter in the name of the lessee. Nominated owner's identity proof and permanent and present address proof having clear photograph should be enclosed.
- d) The lease sketch along with the mining lease boundary pillar co-ordinates authenticated by competent authority of state government of Andhra Pradesh should be submitted along with the letter/survey report. Further the original lease sketch at the time of initial grant be submitted for verification by this office.
- e) All the plans should be prepared based on the lease sketch authenticated by competent authority of the state government, having mining lease boundary pillar coordinates.
- f) Cement plant capacity vis-a-vis Limestone requirement and feeding mines capacities be furnished as per approved document. Rated capacity of the cement plant be mentioned. Further justify the production capacity of this mine. The details of cement plant EC capacity be submitted.
- g) The survey no of the mining lease be mentioned in the cover page.
- h) The date of survey is 09.05.2017, which is not acceptable. The area be surveyed and all the plans and section be prepared on recently updated plan.
- i) As per rule 34 of MCDR-1988, -
 - (1) All digitally prepared plans, sections and print copies thereof kept at the mine shall be suitably indexed.
 - (2) Every plan, section or part thereof prepared under these rules shall carry thereon a certificate for its correctness and shall be signed by the mining engineer with date. Provided

that the geological plans and sections shall be certified and signed by the geologist employed under rule 55.

(3) Every copy of a plan and section or part thereof submitted or maintained under these rules shall bear a reference to the original plan or section from which it was copied and shall be certified thereon by the holder of the mining lease to be a true copy of the original plan or section.

2. Review

- a) Review of exploration, production and development, reclamation and rehabilitation, afforestation be submitted for 2015-16, 2016-17 and 2017-18. In the review of production the review be given for FY 2015-16 and also for the period Dec 2015 to March 2016. Further proper reasons be submitted for deviation.
- b) Details of the earlier approved mining plan/scheme of mining/review of mining plan/modification are not submitted completely.
- c) In the year wise review of waste development the waste has been produced against no proposal for waste development, which should be justified properly. Further review of year wise top soil generation, utilization, storage has not been discussed.
- d) The review of volitions has not been dealt properly. Nothing has been mentioned regarding appointment of Geologist.
- e) In year wise review of exploration is not complete in all respect and further justification be submitted for short fall. In the review of exploratory work the year wise, series wise core and DTH bore holes drilled with total meterage should be furnished in tabular form.
- f) Review of year wise environmental parameter quality, reclamation, plantation proposal and others be submitted.

3. Geology & Exploration

- a) Details of source of climate and rainfall data be submitted.
- b) The geological plan submitted is containing two nos of same leases with geology and one super imposing another, which is not readable and hazy and should be corrected. Further the lease boundary be drawn on the lease sketch along with boundary pillar coordinates authenticated by competent authority of the state government.
- c) The local lithological succession be drawn as per the lithology encountered in the core bore holes.
- d) In the details of prospecting/exploration carried out furnish phase wise details of sampling, phase wise drilling details with borehole number with series, collar RL, date of commencement, date of completion, latitude, longitude, total drilled depth be submitted. Mining pits details like pit name, location co-ordinates, depth has not been furnished in tabular form.
- e) The bore hole wise thickness of mineralized zone encountered with depth of mineralization encountered and average grade be furnished in tabular form for all the drilled bore holes.
- f) Quartzite has been found to outcrop and overlying on Phyllite in the lease at places which should be demarcated on geological plan. Lithological contact boundary be corrected as per the bore hole lithologs. The litho unit termed as soil with quartzite and limestone rubble be replaced by clay with quartzite and limestone rubble. Geological plan should be modified based on the exploration results and Geological sections be prepared as per the geological plan. Lithologs be furnished for all the drilled bore holes.

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The shale occurring in bore hole intersections has not been analysed for its confirmation, which should be carried out meter wise. Geological level of exploration should be mentioned in the geological plan. Potential mineralized area be shown on the geological plan and be mentioned on the text. Area explored under different level of explorations has not been furnished along with the reserves/resources estimated with the grade of Limestone.

g) All the Bore holes should be shown in the Geological plan and projected on the geological section. The BHs be shown in the geological section with their collar level and UNFC wise coding be done and shown in the geological section. Geological sections drawn without having any BH inputs be avoided. Lithological index has not been submitted in the Geological section. Geological sections prepared are not correct as lithological projection have been made without any exploratory bore hole input, no of bore holes are not projected, bore hole collar level has not been projected correctly and the indexes are not marked correctly.

h) Incongruity has been observed in the BH Nos mentioned in the Geological plan and with that of Form-J submitted. Bore hole lithologies are not as per format of Form-J of MCDR-2017. Exploratory bore hole logs of earlier drilled bore holes of CBH series be submitted. Further some mistake has been observed in the bore hole log sheets and intimated during the inspection which should be corrected. All the VPPH series drilled core BHs be logged meterwise along with giving the chemical assay details there and the bore hole lithologies be signed by the in charge geologist and chemist for assay data.

The geological sections should be prepared by correlating the local geology, exposure in the pit and lithology encountered in bore hole and their extrapolation. The year wise production and development section be modified accordingly.

i) Exploration proposal be given for proving the entire potential mineralised area in G1 level of exploration within 2018-19. For knowing the depth persistence of clay zone additional exploratory core bore hole should be proposed and drilled within 2018-19.

j) The geology has not been reconciled with the bore holes drilled which be corrected and submitted.

The existing clay zone, clay encountered in benches should be shown on the geological plan and projected in the geological cross section. The year wise incidental clay generation be assessed and proposed, based on the experience of earlier mining by providing proper justification and current exploration data. The clay should be considered as mineral reject and its separate stacking and record should be maintained.

k) The 10% check samples has not been analysed from NABL accredited lab. The 10% check samples to be analyzed with NABL laboratory should be collected from each bore hole. The details be furnished in tabular format. The analysis report should be submitted in such a way that they should be comparable with the analysis done by the lessee. Further NABL accreditation certificate along with details of accreditation like minerals and parameters which are to be analysed in respect of the laboratory be enclosed.

l) NCCBM study report for the Limestone grade required for the cement production along with clinkerisation factor be annexed.

- m) The average grade of the deposit be mentioned. The depth/level in mRL of the deposit for which the average grade is estimated and details for arriving at the average grade should be submitted.
- n) The category of the deposit as per MEMC Rules-2015 has not been justified and mentioned accordingly.
- o) The modifying factors considered for converting Mineral Resources to Mineral reserves be submitted in tabular form.
- p) The axis wise justification be submitted as per the MEMC Rules 2015 in tabular format. Further Geological axis justification should be as per the geological parameters of exploration as per MEMC Rules-2015. Further the Justification for Geological axis has not been dealt properly. In the feasibility axis justification the mining machinery details be furnished in the infrastructure, costing details be furnished head wise and the economic viability be furnished correctly.
- q) In the prospecting expenditure details of expenditure towards exploratory drilling (type wise), exploratory trenches, exploratory sampling and analysis be furnished year wise.
- r) The ultimate pit slope should not be more than 45 degree or less. Ultimate pit limit depth has not been analysed and furnished. Thus the ultimate pit limit (UPL) should be shown correctly in the Geological plan and section. UNFC code and exploration level considered for different categories of reserves/ resources estimation needs to be marked correctly on the Geological cross section. Assess the ultimate pit limits for the explored mineral and identify the blocked mineral and assign the code to it as per UNFC.
- s) The cut off grade of Limestone is mentioned differently at one place in the text as CaO%-45.80%, SiO₂-15% (page-24) and CaO% ranging between 35% to 40% and SiO₂% ranging between 10% to 13% (page-31). The cut off grade should be mentioned clearly. As the cut off is of higher grade in comparison to the thresh hold value of limestone, generation of sub grade limestone and mineral rejects should be estimated and its stacking, handling should be proposed year wise. The sub grade mineral, mineral rejects should be shown in geological plan and geological section and estimation of both should be done.
- t) The section wise, bench wise reserves/resources along with weighted average grade table be annexed.
- u) Details of the reserves/resources updated as per the UNFC codification be furnished with weighted average grade not in range.

Thus the reserves /resources are not estimated correctly. In light of the above comments the total mineral resources, reserves need to be assessed along with grade and categorized correctly as per MEMC rules-2015.

4. Mining

- a) Dimensions of working pits submitted is not correct and should be as per recent survey carried out.
- b) Proposed production bench height and width should be as per statute and the pit slope should be 45 degree or less than that.
- c) Mining should not cross the UPL boundary both laterally and depth wise.
- d) Sections of yearly production and development should be drawn on the corrected geological plan and geological section.

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- e) The drilling and blasting requirement calculation is not correct. Bench height, width proposed and drilling blasting are not matching with each other. How the powder factor has been arrived should be commented upon. Sub grade drilling has not been considered while calculating the drilling requirement. Type of explosives to be used with % has not been furnished. The drilling and blasting requirement should be corrected as per the bench height and width proposed. Permission nos with date pertaining to deep hole drilling and blasting, ANFO mixing, Explosive Magazine should be mentioned in text.
- f) The calculation in respect of rock breaker is not justified properly. Further the ROM size required and its availability % for breaking by rock breaker has not been furnished. The calculation for mining machineries in respect haulage and transport equipment has not been done correctly. Lead distance given is not correct. Excavating and Loading equipment calculation details have not been furnished.
- g) Mine drainage chapter has not been dealt correctly. Max & min depth of water table and proposed workings has not been furnished in the text. Year wise sump planning with co-ordinates, dimension and capacity has not been furnished in text and shown in plan. Two nos seasonal mala flowing within the lease towards south, thus the environmental protection measures should be proposed.
- h) In the layout of mine working amount of advance to be made length wise, width wise, height, co-ordinates, from -to level(in mRL), Volume has not been furnished.
- i) The area earmarked for production and development in the ensuing plan period has not been justified in terms of generation of waste/mineral reject. The clay has not been explored by means of exploratory drilling to assess it quantitatively and qualitatively. Mining proposal should be given in such a way that there should not be huge generation of waste which requires additional place for storing and be proposed in a systematic manner. Thus in light of the above facts the area proposed for production and development be modified or the submitted proposal be justified properly.
- j) The year wise layout of production and development has not been given properly. In the year wise production and development plans year wise in ward and out ward road and ramp provision with gradient, level of mining to be attained should be shown in YPD plan. The proposed year wise bench wise development should be shown by light coloured hatching with bench bottom level in the P & D plan.
- k) The production and development sections are not correct. The production and development section should be drawn for all the section lines intersecting the proposed production area and also on the same geological sections which have been used for estimating reserves and resources.
- l) The year wise, section wise bench wise weighted average grade of proposed mining block for each year needs to be furnished and the mechanism for the grade control for optimum utilization of mineral along with blending techniques needs to be furnished. Bench parameters needs to be mentioned in the text.
- m) The year wise section wise, bench wise production of limestone and development of waste, mineral reject, sub grade be annexed.
- n) Quantity of waste to be generated vis-a-vis its disposal scheme along with the rehabilitation scheme, of the proposed and existing dumps should be discussed. Summary of all existing waste dumps with details like area, co-ordinates, its height, existing volume.
- o) Dumping of waste should not be proposed in steeply dipping terrain and be proposed in terraced manner. Future plan for its disposal and rehabilitation be discussed. The built up of

dumps from year to year to be shown in yearly plans and sections. Designed capacity & height of individual dump and precautions envisaged for confinement of the dumps along with protective works, needs to be described. Before proving the barrenness of the area the waste dump should be mentioned as temporary waste dump. Environmental protection measures for the existing dump and proposed dump be discussed.

p) The year wise generation of subgrade mineral and rejects should be discussed and the built up of dumps from year to year to be shown in yearly plans and sections. Designed capacity & height of individual dump and precautions envisaged for confinement of the dumps along with protective works, needs to be described. The quantity of top soil likely to be generated during the ensuing five years needs to be furnished along with the arrangements for its storage.

q) The conceptual plan and section is not correct as it contains only the ensuing proposal. Conceptual status of mine at the end of lease period be discussed for exploration, waste and sub grade generation, pit development, land use pattern, afforestation, reclamation and rehabilitation be discussed correctly taking in to account of the safety zone area, bench height and width, bench slope and ultimate pit slope as per statute. Conceptual plan and section be prepared and submitted and the conceptual status of mine should be same in the text and with submission in plates.

5. Progressive mine closure

a) The net area put to use for mining and allied activities is on lower side. Thus head wise area put to use be corrected and be submitted and accordingly the calculation of financial assurance be corrected and submitted.

b) Summary of baseline environmental information should be furnished.

c) Gist of last quarter environmental monitoring has not been furnished. Environmental monitoring reports should be furnished on the Environmental monitoring agency's letter head.

d) The year wise proposal for development of gaitland drain, retention wall, gully checks, retaining bund for top-soil, siltation pit, check dam be discussed in text and shown in the reclamation –rehabilitation plan. Details like location, co-ordinates, and dimensions should be submitted.

e) The year wise plantation be proposed along the 7.5m safety zone giving details like location, co-ordinates.

f) The environmental monitoring should be proposed for Air, Noise, Water, Soil as per the statutory requirement within the core and buffer zone and should be furnished in tabular format with details like location name, co-ordinates, frequency of sampling in text and locations in key plan, reclamation-rehabilitation plan.

g) Environmental protection measures for waste dump be discussed and proposed.

6. Plates

a) The bench mark should be established and its co-ordinates and mRL should be furnished in text and shown in the plans. The surface plan submitted is not upto date.

b) The plans and sections should be prepared as per rule 31 and 34 of MCDR-2017. All the plans Date of survey should be mentioned.

a) All the plans should be prepared and submitted in UTM co-ordinate grid (WGS 84 mode) along with marking the earlier approved mining plan assumed grid co-ordinates in different

colour. The method adopted for linking the assumed co-ordinates to national grid (UTM) along with the permanent structures (common GCP points) be submitted.

- c) Conceptual plans and section be prepared and submitted upto the lease expiry.
- d) In general it has been observed the indexing are not made properly.
- e) In the key plan the ambient air quality station, water monitoring stations, and noise monitoring station should be shown.
- f) In the financial assurance plan the proposed mining area be shown in the plan.
- g) Features outside lease area be avoided except environmental plan. The boundary of adjacent mining lease area of Hemadri Limestone Mine of M/s Hemadri Cement Limited, Cement plant of M/s Hemadri Cements Limited and others features be shown on the environmental plan.

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1. The first part of the document is a list of names of people who were present at the meeting.

2. The second part is a list of names of people who were not present at the meeting.

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