

**Inspection report cum scrutiny comments on the Review of Mining Plan submitted by the by M/s Sagar Cements Limited in respect of Sagar Cement Limestone Mine-II (143.72 hectare) in village Pedaveedu, Mandal-Mattampalli, District- Nalgonda in Telangana State.**

Mine Official present during inspection: Sri S. Subramanian, Sr G.M, Mr MD Nayeem, QP

1. Surface Plan submitted is not updated with actual field condition: During inspection of mines it is observed that on Southern side of the lease area, Pit is found at a distance of about 9 meters from Lease boundary (Common with Reserve Forest Boundary), whereas pit is shown about 90 meters away from lease boundary, thus surface plan submitted is not in consonance with actual field condition. Thus actual location of bore holes drilled cannot be ascertained.
2. Surface plan submitted is not consonance with lease sketch authenticated by State Government, which are as below:
  - I. Excluded Sy. nos. 311, 312, 313 are not shown in the in surface Plan.
  - II. Position of nala passing through the lease area, road etc. depicted in Surface plan are different than the lease sketch.
  - III. Lease boundary pillars are numbered differently in surface plan compared to lease sketch.
3. Co-ordinates of lease boundary pillars duly authenticated by State Government in compliance of CCOM circular 2/2010, to establish the precise lease area should be submitted for considering the document for further processing.
4. Environment plan submitted is incorrect, during field inspection it is observed that lease boundary is found adjacent to Public Road Prdavedu to Mattampalli, whereas the same is shown as about 450 meters away.
5. The document is submitted to increase the production from 3,50,000 TPA to 4,14,900 Tonnes per annum, justification for the same should be submitted.
6. The number of State-wise leases/ PL already held by the lessee/applied for should be given indicating type of mineral, area, location etc. as per following format.

Sl. No.	Lease reference no. & date	Area	Postal address location	Type of mineral	Remarks

7. Status of statutory clearance like EC, CTO, CTE etc. In respect of the lease obtained by M/s Sagar Cements Limited be furnished.

**GENERAL:**

8. The document should be submitted as per the prescribed format of “IBM Manual for appraisal of Mining plan 2014” only.
9. Para 1.0. (a): Name of Nominated owner with address, mail id, phone no. with supporting documents should be furnished. Further Register address of the company (lessee) should be furnished.
10. Copy of certificate of incorporation of the company M/s Sagar Cements Limited be submitted.

**Review**

11. Year wise Details of earlier approved proposals with actual work done be furnished. Review should be done as per earlier approved document for clarity.
12. Exploration as proposed in the earlier approved plan has not been carried out, the above deviation be recorded.
13. Details of earlier approved MP/SOM/PMCP with validity period be submitted.
14. Public road is passing adjacent to lease area on Western side of the lease, the same be recorded in page no.5.
15. The details of CSR is furnished in page no.10, which is not warranted as per the format

### **Geology and Exploration:**

#### 16. Geological Sections:

- i. Depth of ore occurrence shown in the present submission is different than the approved document without any input of exploration, which needs to be corrected.
- ii. Section C-C' is not matching with the same of earlier approved document: without any input of bore holes 'Resources' in the earlier approved document had been considered as 'Reserves'.

17. Documentary evidence in respect of expenditure incurred in various prospecting operations carried out in the lease area be furnished.

18. Phase wise exploration carried out in the lease area should have been furnished in tabular form in para "Exploratory drilling" incorporating no. of bore holes, year of drilling, total meterage, type of drilling (DTH/ Core), angular/ vertical, maximum and minimum depth etc. Further, details of all bore holes drilled so far should be submitted in another table incorporating Bore hole no., location (Lat/ Long), collar RL, Depth at which ore encountered/ exhausted from surface, angular/ vertical, core recovery% etc.. Meter wise analysis of bore holes logs should be submitted duly signed by the concerned Geologist under whose supervision the exploration was carried out. Location of bore holes should be furnished in UTM co-ordinates also for clarity.

19. Comment on compliance of rule 12(4) of MCDR,2017 should be furnished to cover the entire potential area in G1 level and to drill bore hole up to contact zone.

20. Reserves & Resources should be estimated in block wise as Nala is dividing the lease in to 4 blocks for easy reference.

21. Reserves & Resources should be estimated and updated based on recent exploration, lease period etc. for clarity. Further bench wise & Limestone wise (Light Grey Limestone, Grey Limestone, Green Limestone, Purple flaggy Limestone etc.), block wise resources/reserves with weighted average grade should be furnished in tabular form. Justification of UNFC codes for reserves/ resources assessed should be furnished.

22. Ore occurrence in the present submission is considered on lower side than the earlier approved one in section C-C', needs clarification.

#### **Mining/ year wise production:**

23. Present status of working incorporating pit dimension, no. of benches in ore/ waste with RL, bench height & width, Pit bottom etc. be furnished in tabular form.

24. The year wise development & production proposal should be furnished for balance period of the year 2019-20. Further the previous position of the pit as on 01.04.2019 be shown by dotted line.

25. Pit Layout should be detailed in the text and depicted in year wise development plans. Mine road to crusher is found passing through the Seasonal Nala but depicted different in surface plan, to be corrected.

26. The bench wise weighted average grade of proposed mining block for each year along with schedule of grade control need to be furnished.

27. The Fourth & Fifth year production proposal is stated as '2018-19' & '2019-20', which is incorrect.

28. Yield per hole needs to be corrected in light of bench height of 6 meters.

29. Year wise development proposal up to safety zone of Nala is furnished, which needs to be modified in view of comment at sl no.4.

#### **Conceptual plan:**

30. Conceptual plan should be prepared based on lease period and proposed rate of production.

#### **Drainage:**

31. It is submitted that the ground water table is at 15 to 20 meters of depth in rainy season and 40 to 50 meters in summer, basis of the same be furnished.

PMCP:

32. It is submitted that, area of about 5.75 Ha has been afforested. Location details of the same, be furnished and depicted in all Plans, Further detail information on plantation be furnished.
33. At present plantation has been carried out all along southern side of lease area within 7.5 meters of lease boundary on southern side, details of the same be furnished.
34. Financial assurance should be submitted @Rs. 3,00,000 per hectare and computed afresh based on comments above.

**Plans and sections:**

35. In all plans and sections Grid lines should be furnished in UTM co-ordinates for easy reference.
36. In Surface plan, Bench mark, Ground control points and surface right held should be marked.

Geological plan and Section:

37. Area under different levels of exploration be marked as per Geological axis of UNFC on the geological plan and sections.
38. Key plan should be submitted on Survey of India topo-sheet and the details as per the provision of rule 32(5) of MCDR,2017 should be incorporated.
39. Surface Geological plan is prepared on 1:2000 scale, whereas in page no.16 the same stated as 1:5000 scale, needs correction.
40. Geological Plan and section submitted is not matching with actual field condition in view of comment at sl. no.1. Geological section should be submitted on 1:1000 scale to indicate distinctly RLs, Lithologs, bore hole details, UPL etc.
41. Area under different levels of exploration be marked as per Geological axis of UNFC on the geological plan and sections.
42. Details of Mineralised and non mineralised area should be submitted in the text and demarcated in plans.

Environment plan:

43. Details like mineral transportation road leading to crusher (situated outside the lease) is not shown properly, Reserve forest land.

In view of the comments above, modification in relevant para/ plans and sections should be suitably modified.

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Violation:

1. It was approved to drill 22 no. of bore holes in the lease area so as to cover the entire lease area in G1 /G2 level, whereas it is noticed that proposed bore holes PCB-1, 2, 3, 4, 5, 6, 7, 10, 12, 13, 17, 18, 19, 20 were not drilled.
- 2.

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44. Surface Plan submitted is not updated with actual field condition: During inspection of mines it is observed that on Southern side of the lease area, Pit is found at a distance of about 9 meters from Lease boundary (Common with Reserve Forest Boundary), whereas pit is shown about 90 meters away from lease boundary, thus surface plan submitted is not consonance with actual field condition. Thus bore holes drilled on Southern side of the lease area viz. C/F/01, D/12/10, C/A/01 etc. shown in the surface plan and that of as per the field condition, are part of the lease or outside the lease is under question. Subsequently the reserves/ resources estimated considering the above bore holes, year wise development and production proposal as well as at conceptual stage is as per the statute or not.

45. Based on inspection of the mine and Surface plan submitted as stated at sl no.1, it seems that Forest boundary is overlapping the lease, in this regard clarification has to be submitted whether lease is granted in Forest area or not.
46. Surface plan submitted is not consonance with lease sketch authenticated by State Government, which are as below:
- IV. The lease was granted in Sy no. 540 only, whereas sy. nos. 311, 312, 313 are shown in the lease sketch authenticated bby State Government, these excluded areas are not shown in surface Plan.
  - V. Position of nala passing through the lease area, road etc. depicted in Surface plan are different than the lease sketch.
  - VI. Lease boundary pillars are numbered different.

Thus in view of above comment at sl. nos. 1,2,3 actual precise area could not be established in the field. In this regard Co-ordinates of lease boundary pillars duly authenticated by State Government in compliance of CCOM circular 2/2010, to establish the precise lease area should be submitted for considering the document for further processing.

47. Environment plan submitted is incorrect , during field inspection it is observed that lease boundary is found adjacent to Public Road Prdavedu to Mattampalli, whereas the same is shown as about 450 meters away.
48. The document is submitted to increase the production from 3,50,000 TPA to 4,14,900 Tonnes per annum, justification for the same should be submitted with due consideration of systematic mining, mineral conservation and environment protection point of view.
49. Detail be submitted in respect of rated clinker capacity of plant, Limestone requirement and approved capacity of leases feeding to plant with blending ratio pertaining to Sagar Cements plant as well as Eswari Cement Plant existing on North – Eastern side of the lease area be furnished for clarity.
50. The number of State-wise leases/ PL already held by the lessee/applied for should be given indicating type of mineral, area, location etc. as per following format.

Sl. No.	Lease reference no. & date	Area	Postal address location	Type of mineral	Remarks

51. Status of statutory clearance like EC, CTO, CTE etc. In respect of the lease obtained by M/s Sagar Cements Limited be furnished.

**GENERAL:**

52. The document should be submitted as per the prescribed format of “IBM Manual for appraisal of Mining plan 2014” only.
53. Para 1.0. (a): Name of Nominated owner with address, mail id, phone no. with supporting documents should be furnished. Further Register address of the company (lessee) should be furnished.
54. Board of Directors of the company submitted in the document and that of as per Registrar of Companies are in variance, needs to be corrected.
55. Copy of certificate of incorporation of the company M/s Sagar Cements Limited be submitted.
56. Para 3.5, details of any court order/ prohibitory order issued by any Government agency under any rule or court of law be furnished.
57. Few photographs showing the land use of the lease area, environment status be enclosed.

**Review**

58. Year wise Details of earlier approved proposals with actual work done be furnished. Review should be done as per earlier approved document for clarity.
59. Exploration as proposed in the earlier approved plan has not been carried out, the above deviation be recorded.
60. It is approved to blend high grade ore of this mine with low grade ore of adjacent lease for mineral conservation point of view, in this regard the manner in which blending of high grade of this mine with be detailed.
61. Details of earlier approved MP/SOM/PMCP with validity period be submitted.
62. Public road is passing adjacent to lease area on Western side of the lease, the same be recorded in page no.5.
63. The details of CSR is furnished in page no.10, which is not warranted as per the format

**Geology and Exploration:**

64. Geological Sections:
  - iii. Depth of ore occurrence shown in the present submission is different than the approved document without any input of exploration, which needs to be corrected.
  - iv. Section D-D': without any input of bore holes 'Resources' in the earlier approved document had been considered as 'Reserves'.
65. Documentary evidence in respect of expenditure incurred in various prospecting operations carried out in the lease area be furnished.
66. Phase wise exploration carried out in the lease area should have been furnished in tabular form in para "Exploratory drilling" incorporating no. of bore holes, year of drilling, total meterage, type of drilling (DTH/ Core), angular/ vertical, maximum and Minimum depth etc. Further, details of all bore holes drilled so far should be submitted in another table incorporating Bore hole no., location (Lat/ Long), collar RL, Depth at which ore encountered/ exhausted from surface, angular/ vertical, core recovery% etc.. All the Meter wise analysis of bore holes logs should be submitted duly signed by the concerned Geologist under whose supervision the exploration was carried out. Location of bore holes should be furnished in UTM co-ordinates also for clarity.
67. Comment on compliance of rule 12(4) of MCDR 2017 should be furnished to cover the entire potential area in G1 level and to drill bore hole up to contact zone.
68. Reserves should be estimated in block wise as Nala is diving the lease in to 4 blocks for easy reference.
69. Reserves should be estimated and updated properly considering additional reserves established based on recent exploration, lease period etc. for clarity. Further bench wise & different grade of Limestone wise (Light Grey Limestone, Grey Limestone, Green Limestone, Purple flaggy Limestone etc.), block wise resources/reserves with weighted average grade of ore should be furnished in tabular form. Justification of UNFC codes for reserves/ resources assessed should be furnished. Reserves/ Resources should be estimated as per MEMC Rules 2015, threshold value published by IBM. Further Justification of reserves/ resources under codification of UNFC should be furnished
70. Life of the mine is stated to be 135 years but lease period as per MMDR Act is valid up to 2035 only, the status of balance reserves of 129 million tonnes considering production at the rate of 0.4 million tonnes per annum be commented upon.
71. Ore occurrence in the present submission is considered on lower side than the earlier approved one in section C-C', needs clarification.

**Mining/ year wise production:**

72. Present status of working incorporating pit dimension, no. of benches in ore/ waste with RL, bench height & width, Pit bottom etc. be furnished in tabular form.
73. The year wise development & production proposal should be furnished for balance period of the year 2019-20. Further the previous position of the pit as on 01.04.2019 be shown by dotted line.

74. Pit Layout should be detailed in the text and depicted in year wise development plans. Mine road lead to crusher is found passing through the Seasonal Nala but depicted different in surface plan than that in the field.
75. The bench wise weighted average grade of proposed mining block for each year along with the mechanism for the grade control for optimum utilization of mineral and blending techniques needs to be furnished.
76. The Fourth & Fifth year production proposal is stated as '2018-19' & '2019-20', which is incorrect.
77. Bench height is proposed to enhanced from 4 meters to 6 meters blasting parameters like Burden and spacing is reduced from 4m x 4m to 4m x 3m, needs to be clarified as it may affect OMS.
78. Yield per hole considered is higher side by taking bench height of 6.6 meters instead of 6 meters, needs to be corrected.
79. Crusher is found outside the lease area, no weigh bridge is inside the lease, the basis of production reported be furnished.
80. Year wise development proposal up to safety zone of Nala is furnished, which needs to be modified in view of comment at sl no.4.

#### Conceptual plan

81. Conceptual plan should be prepared is sketchy, ultimate pit depth is not furnished. UPL based on exploration done so far, lease period, blending ratio etc. is not detailed. Life of the mine is stated to be 135 years but lease period as per MMDR Act is valid up to 2035 only, accordingly land use pattern, reclamation and rehabilitation, top soil management etc. and plans and section should be suitably modified.

#### Drainage

82. It is submitted that the ground water table is stated to be 15 to 20 meters in rainy season and 40 to 50 meters in summer, basis of the same be furnished. Study on Ground water table from institute of National repute conducted if any to assess the impact of Mining on ground water table be submitted.

#### PMCP

83. Area of about 5.75 Ha has submitted afforested, the location details of the same, be furnished and depicted in all Plans, Further total plantation done incorporating different species planted be furnished.
84. At present plantation has been carried out all along southern side of lease area within 7.5 meters of lease boundary on southern side, details of the same be furnished.
85. Financial assurance should be submitted @Rs. 3,00,000 per hectare and computed afresh based on comments above.

#### **Plans and sections**

86. In all plans and sections Grid lines should be furnished in UTM co-ordinates for easy reference.
87. Lease is granted in Sy no.540 whereas in lease sketch sy no. 311,312,313 are marked, whereas the same is not marked in all plans and sections.
88. Mining Engineer & Geologist appointed under rule 55 of MCDR 2017 should put their signature in relevant plans and sections
89. Surface plan should be prepared and duly dated and signed by Mines Manager also. Further Bench mark, Ground control points based on which updated survey has done and surface right held should be marked.

#### Geological plan and Section:

90. Area under different levels of exploration be marked as per Geological axis of UNFC on the geological plan and sections.
91. Key plan should be submitted on Survey of India topo-sheet and the details as per the provision of rule 32(5) of MCDR,2017 should be incorporated.
92. Surface Geological plan is prepared on 1:2000 scale, whereas in page no.16 the same stated as 1:5000 scale, needs correction.

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94. Area under different levels of exploration be marked as per Geological axis of UNFC on the geological plan and sections.
95. Details of Mineralised and non mineralised area should be submitted in the text and demarcated in plans.

Year wise development and production plan

96. Year wise development plan for the balance year 2019-20 should also be submitted.  
Environment plan
97. Details like mineral transportation road leading to crusher (situated outside the lease) is not shown properly, Reserve forest land.

In view of the comments above, modification in relevant para/ plans and sections should be suitably modified.

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Violation:

3. It was approve to drill 22 no. of bore holes in the lease area so as to cover the entire lease area in G1 /G2 level, whereas it is noticed that proposed bore holes PCB-1, 2, 3, 4, 5, 6, 7, 10, 12, 13, 17, 18, 19, 20 were not drilled.
- 4.

