



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. RMP/A/25-ORI/BHU/2019-20

Date: 24.10.2019

सेवामे

Shri T V Narendran, Managing Director & Nominated Owner,
Tata Steel Ltd,
At/P.o- Jamsedpur,
Dist – East Singbhum,
Jharkhand - 831001

विषय: Approval of Review of Mining Plan of Joda East Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 671.093 ha in Keonjhar district of Odisha State, submitted by M/s Tata Steel Ltd under Rule 17 of MCR, 2016.

संदर्भ: - i) Your letter No. GM/PL/362/56/2019 dated 30.09.2019.
ii) This office letter of even no. dated 01.10.2019.
iii) This office letter of even no. dated 01.10.2019 addressed to Director of Mines, Government of Odisha copy endorsed to you.

महोदय,

This has reference to the letter cited above on the subject. The draft Review of Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office based on site inspection carried out on 20.10.2019 by Shri Ramkishan R, Senior 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 Review 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 Review 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 Review 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 final copies of the Review of Mining Plan. It may be noted that no extension of time in this regard will be entertained and the Review 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.

भवदीय,
हरकेश मीना

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Sanjit Kumar Adhya, Tata Steel Ltd, At/P.o- Jamsedpur, Dist – East Singbhum, Jharkhand - 831001.

(हरकेश मीना)
क्षेत्रीय खान नियंत्रक

21/07/2022

Scrutiny comments on examination of Review of mining plan with PMCP of Joda East Iron Ore Mines over an area of 671.093 Ha in Keonjhar District of Odisha State of M/s TATA Steel Ltd

GENERAL POINTS:

1. All the text, tables and annexures to be properly indexed/ numbered/ paged and signed by qualified person. Correct table reference number to be mentioned at all relevant places. All the certificates/annexures should bear dated signature.
2. Sequence of paragraph and its numbering as per IBM Manual Appraisal MP 2014 has not been covered in text. All the headings as mentioned in the IBM Manual Appraisal MP 2014 should be furnished in all chapters in the text.
3. The qualification of QP should be mentioned on cover page and also under para 1.f. IBM registration number, mine code, category of mine should be mentioned and Address of the lessee should be furnished on cover page.
4. It is furnished as lease area of Manmora area also included in Joda east lease area. The relevant documents and plans in support of the statement should be furnished with annexures. There should not be no proposal regarding the manmora lease area in this document expect FA.
5. The term "subgrade" part of ROM should be replaced with "Mineral Reject" at all places in the document.
6. The surface right area granted should be furnished with documentary evidence. Present status of all statutory clearances viz., EC, FC, CTO, etc., should be furnished with referring to documentary evidences as annexures.
7. MCDR, 1988 should be replaced with relevant rules of MCDR, 2017 as well as for MCR, 1960 with MCR, 2016.
8. The status of Forest clearance details like diverted and stages of total Forest area should be furnished as on date. The details furnished regarding power requirement may be omitted.
9. In Introduction the details of iron ore requirement for captive steel plants should be furnished with justification for the proposed ore production.
10. The copy of the qualification & experience certificate in respect of the QP to be enclosed as per Rule 15 of MCR, 2016.
11. Review of the period which was not covered in the last approved document only should be furnished under para 3.3. under para 3.4 all the violations and compliances which were not covered under last approved documents should only be furnished.
12. The information furnished under Para 3 should be in Para 3(1). In Para 3.1, the date of approved mining plan/review of mining plan should be given in tabulated format.

Sl. No	Mining Plan / Review of Mining Plan etc.	Submitted Under (Rule Reference)	Approval Letter No. & Date	Period	Valid up to

Geology and Exploration

13. The information of drilled BH to be submitted as per following format which should be enclosed as a annexure:

S.No.	Year	BH Id	Easting	Northing	Collar RL	Inclination	BH Depth	Type of BH	No. of samples
1			UTM	UTM	mRL				

No of samples analyzed from pitting and trenching should also be furnished and also the total no of samples analyzed in the NABL laboratory should also be furnished with analysis report and certificate enclosed annexures.

14. The table showing status of exploration under UNFC should be recalculated as per Part II point no.4 of MEMC Rules 2015. The justification for area considered for G1/G2/G3 etc. should be given w.r.t MEMC rules 2015. Revised UNFC boundaries have to be drawn. Necessary corrections to be done at all relevant places of the document (text and in plates). The depth of litho units should be taken up to the proven depth only, not beyond it. The regarding the explored areas should be furnished in the following format.

Total Lease area:							Remarks/Comments including reasons for not carrying out the exploration as per UNFC norms.
Item of information	Lease area explored as per UNFC norms (in Ha) as on dt.					Unexplored lease area	
	Total Lease area = A+B+C+D+E						
	G1 Level	G2 Level	G3 Level	Explored and found non-mineralized with level of exploration (Remarks)			
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							
Reserve estimated after above exploration as on dated :							
Remaining Resource after above exploration as on dated:							
Total Reserve/Resource after above exploration as on dated:							

Area	Lateral Extent in Ha	Remarks
Total Lease Area		
Explored area		Min. and Max. depth
Explored Area Under		Min. and Max. depth

G1		
Explored Area Under G2		Min. and Max. depth
Explored Area Under G3		Min. and Max. depth
Mineralized area under G1		Min. and Max. depth
Mineralized area Under G2		Min. and Max. depth
Mineralized area Under G3		Min. and Max. depth
Non Mineralized are under G1		Min. and Max. depth
Non Mineralized area under G2		Min. and Max. depth
Non Mineralized area Under G3		Min. and Max. depth
Unexplored lease area		Extent of Forest area and Non forest Area should be mentioned.

The future exploration program to be revised incorporating the following.

- Additionally, new core boreholes to be proposed in the location adjacent to existing drilled boreholes that have been either terminated in the ore zone or closed prematurely without intersecting the proposed ore zone in depth within G1/G2 area.
- The depth of the proposed core boreholes should be around 300m or till the end of mineralization/discontinuance of ore body. The proposal to be mentioned.
- Adequate proposal of exploration to be given to explore lease area under G2 level of exploration as per MEMC, rule 2015 and also G1 level of exploration should be proposed in the mineralized area which should be completed in compliance to the rule 12 (3)&(4) of MCDR, 2017. Accordingly exploration proposal should be modified. only core type drilling of boreholes should be proposed.
- The revised drilling proposal complying the above points (a,b & c) should be given in the format tabulated below.

Year	No of Boreholes	Type of borehole	Grid Interval	Total Meterage	No. of Pits, dimensions and volume	No. of Trenches, dimensions and volume

(e) The details of the proposed boreholes have to be furnished in following tabular format.

Year of drilling	Section No	Proposed BH no	Northing	Easting	Collar RL	Core/ RC/DTH	Proposed Depth	inclination	Forest/ Non Forest/ Diverted Forest area	Surface Right/Non-surface Right area

(f) As per MEMC Rules 2015, check analysis of at least 10% of samples may be analyzed from third party NABL accredited/or department of science & technology (DST) / BIS

recognized laboratories or government laboratories for assessing the acceptable levels of accuracy. Accordingly, the proposal should be given under future exploration programme.

- (g) In the table under proposed exploration program, a column should be inserted showing the purpose of borehole (for lateral extension or depth ward) conversion of G2 or G3 area to G1 or for unexplored area.
15. The section wise resource and reserve for Ore and Mineral Reject has to be re calculated in accordance with MEMC Rules,2015. The cut off grade should be furnished as 58% Fe in all relevant part of document and threshold value as 45% Fe. The quantities estimated for Ore (58% Fe and above), mineral rejects (between 45% Fe to 58% Fe) and waste (IB/OB/SB) should be calculated separately and same should be furnished in tabulated format along with section reference by cross section area method. The cross sections should be drawn from boundary to boundary of lease area on the Geological plan with equal interval. Accordingly relevant plans and sections should be modified. The calculation tables should be furnished in the text. The justification for estimation of mineral rejects, ore and waste should be elaborated.
 16. The type of waste whether it is IB or OB or SB should also be furnished. The figures furnished should be in line with the final estimated figures of UNFC table of reserve and resources. The UPL has to be redrawn as currently the UPL is inside the ore zone as shown in Geological plan and sections to fully extract the mineralized area with optimized stripping ratio. The quantities of material above threshold vale i.e.45% Fe and above UPL should be taken in to reserves category.
 17. Parameters considered for reserve estimation should be further elaborated. Proper justifications of reserves/resources under various categories of UNFC as shown in the table have to be submitted for different axis should be furnished in tabular format. The reserves and resources should be estimated up to the proven depth of boreholes only. No further influence of litho below the proven depth should be considered.
 18. Justification for increase of reserves and resources from the last approved mining plan to the present draft document should be elaborated. The final presentation of reserves and resources table should be as per the table format specified in the IBM Manual Appraisal MP 2014. bulk density of different material taken into consideration for estimation of reserves and resources should be furnished with the same analysis reports that carried out in NABL laboratory should be annexed for that purpose.
 19. The copies of Form –I and particulars of boreholes drilled till date and recorded in Form –J as per the format specified in MCDR 2017 should be furnished and enclosed as annexures.
 20. The geological sections doesn't corroborate with the borehole log data chemical analysis and litho mentioned. Check and rectify the same.

MINING

21. The description of the existing pits in the following table to be furnished.

Existing Pits:

Location (Grid) UTM	Surface area covered (in Ha)	Top RL (m)	Bottom Rl (m)	No of benches

22. Dump re-handling should only be proposed for the existing waste dumps / old mineral rejects dumps for recovery of mineral. This should also be rectified in the text part of the document wherever mentioned. Dump re-handling (for the purpose of recovery of mineral) should be submitted in format specified in IBM Appraisal of MP 2014 only for waste dumps. The recovery of ore and mineral reject should be properly justified.
23. In page no 72 the mineral rejects figures provided in the table should be rechecked and rectified. The justification for the percentage of ore and mineral rejects quantities furnished for the proposed years should be furnished viz., recovery of ore in ROM.
24. Justification for site selection for mining during the proposed plan period should be furnished
25. 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 (in UTM coordinate)	
	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)	

26. Describe 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. A reference to the plans and sections may be given. UPL or ultimate size of the pit is to be shown for identification of the suitable dumping site. The information on proving the area for barrenness (devoid of ore through exploration) and outside the UPL should be properly described. The area wise existing and proposed waste dump, its name/nomenclature and locations in UTM coordinates should be furnished in tabular format with holding capacities. Proper justification should be given for requirement of new waste dumping sites along with site specific justification for the new waste dump locations selected and proposed for dumping at all the locations. Justifications should be supported with plans and sections.
27. The proposed ROM figures from the in-situ excavation and dump re-handling should not be more than EC limit.

39. The proposed waste and mineral rejects quantities that are going to be handled during the proposed plan period should be furnished with proper justification like present waste dumps, mineral rejects stacks holding capacities. The proposed dump heights should not be more than 60 m in height otherwise supported by a scientific study conducted by a reputed institute. The report should be enclosed.
40. The proposed waste dumping furnished in tables in page no.58, 59 a column should be added for whether it is in outside UPL or within UPL, a column for nature of dumping whether it is permanent or temporary and also a column whether it is mineralized area or non-mineralized area. the waste dumping proposals should be in non-mineralized area or outside UPL, If it is within UPL and mineralized area they should be of temporary and proper justification should be given with rehandling proposal. The area proposed for overburden dumping shall be proved for its non-mineralization through exploration. Accordingly, the priority of drilling has to be proposed so that the area is proved to be barren before overburden dumping. The same should also be described under the paragraph. Necessary modification to be done in the text accordingly.
41. The above should also be furnished for mineral rejects stacks.
42. The proposal for dumping may be given in tabulated format as shown below : Further, 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 slope, individual terrace height and slope with description of method & manner of disposal of waste should be mentioned. The method of waste dumping should be in retreating manner. The year wise buildup of dump should be described in the following table. The table is for the waste quantity which is going to be stored in dumps.

Year	Waste to be dumped (in m ³)	Dump Nomenclature	Location of dumping (coordinates)	Existing and Proposed area (m ²)	Proposed dumping Terrace from and to mRL.	No of terrace proposed.	Individual Terrace height	Slope of the terrace	Over slope angle dump

a column should be added to the above table for whether it is in outside UPL or within UPL, nature of dumping whether it is permanent or temporary and whether it is in mineralized area or non-mineralized area.

43. The above should also be furnished for mineral rejects stacks also.
44. The backfilling of waste dumps is also proposed during the plan period. Proper justification should be furnished regarding the proposed area for exhaust of mineral with relevant boreholes litho and the same should be referred with section numbers on relevant plans and sections. The backfilling proposal should be given in the following format.

Year	Waste to be backfilled (in m ³)	Area Nomenclature	Location of backfilling (coordinates)	Existing and Proposed area (m ²)	Proposed backfilling from and to mRL.	Relevant plan/section reference number

45. Existing as well as proposed protective measures like retaining wall, garland drain, check dams etc., should be furnished in tabular format with details of location, length, dimensions etc., a separate table should be given showing the year wise construction of retaining wall,

garland drain and settling tank having specific proposal. Details of year wise proposal for construction of retaining wall, garland drain, settling tank etc. to be given with their location.

46. The necessary corrections should be made in the relevant plans and sections according to the modified plan of handling of waste and mineral rejects.

USE OF MINERAL and MINERAL REJECT

47. Describe briefly the requirement of end-use industry specifically in terms of physical and chemical composition of the mineral with documentary evidence. The authenticated document like MoU signed by competent authority for the requirement of quality of mineral required for different end use plants specifying of physical and chemical composition of the mineral should be furnished with enclosed as annexure.
48. Give brief requirement of intermediate industries involved in up gradation of mineral before its end-use viz., pelletisation, sinter plants and sponge iron plants etc., in terms of physical and chemical composition of the mineral with documentary evidence.
49. Give detail of requirements for other industries, captive consumption, export, associated industrial use etc. in terms of physical and chemical composition of the mineral in your case it is by steel plant for captive consumption.
50. Give details of processes adopted to upgrade the ROM with in lease area including mineral reject if any to suit the user requirements i.e. captive steel plant in terms of physical and chemical compositions viz., like beneficiation processes adopted and also efforts for complete utilization of ROM produced from mines in captive steel plant by blending of mineral, in mineral conservation point of view..

PROCESSING OF ROM AND MINERAL REJECTS

51. The material balance chart to be furnished. The ROM feed grade and tonnage with recovery%, grade and tonnage of product at each stage of processing may be shown in the flow sheet along with block diagram both for existing and the proposed benefaction plant. The details should be for both dry and wet process. The study reports for the existing and the proposed plants should be annexed.
52. The summary of the physical and chemical composition of feed material for the existing beneficiation process for both wet and dry circuit along with different output products physical and chemical composition (with nomenclature of product) should be furnished with recovery percentages. The same should also be furnished for the new beneficiation process.
53. The flow sheets, diagrams, of the existing and proposed plants should be furnished. Necessary legible flow sheets and diagram should be submitted.
54. The existing stock of tailings already disposed should be furnished in the following format
Existing slime/tailings stocks:

Sl. No	Tailings nomenclature	Location in UTM coordinates	Area occupied		Volume in Cu.m.	Quantity in (Tonnes)	Grade
			(m ²)	(ha)			

55. The quality of tailings disposed should be furnished in terms of physical and chemical composition of the material to be disposed at tailings site.
56. The study report regarding the site of tailings disposal with holding capacities should be enclosed.

57. Water balance flow chart diagram should be furnished.

OTHERS

58. Information in respect to the proposed manpower both on departmental role and contractual has to be mentioned separately in the text for managerial level, supervisory level and others.

PROGRESSIVE MINE CLOSURE PLAN

59. Existing base line information to be furnished on the basis of environment monitoring parameter carried out. The environment monitoring data of last one year to be enclosed for ready reference.

PLATES (General):

1. The plans and sections to be submitted as per the scale relaxations specified in approval letter by IBM the part plans and sections should be prepared on 1:1000 scale.
2. Show a scale of the plan at least twenty-five centimeters long and suitably sub-divided. The conventions provided under the Metalliferous Mines Regulations, 1961, shall be used in preparing all plans and sections. All plans and sections should comply with the provisions of Rule 32 of MCDR 2017. 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. All plans and sections should be signed with date by Qualified Person. Date of observation of Magnetic meridian should be shown in all plans.
3. Along with local grid coordinates, UTM coordinates should also be provided in the grid lines and latitude/longitude coordinates should be mentioned adjacent to boundary pillars in all plans and sections.
4. The UPL has to be redrawn based on provision of UNFC boundaries as per MEMC Rules 2015 and should be shown in red color in all relevant plans and sections.
5. The existing and proposed bench positions clearly with mRL to be mentioned in the all plans and sections.
6. Date of survey should be given on plan and sections and the same should be signed by with date. Grid Lines to be shown in all sections - Geological Sections, Development Sections, Conceptual sections, Dump sections etc.
7. The lithology should be shown in all relevant sections.
8. Year wise development part plan and sections should be submitted in the scale of 1:1000
9. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist
10. With reference to CCOM Circular No 2/2010, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted. the submitted DGPS plan does not mentioned about the lease area. Rectify the same and submit.

Key Plan:

11. The key plan should incorporate all features as mentioned Rule 32 5 (a) of MCDR 2017 and all features should be shown in index as well.
12. Approach road to lease area should be shown in key plan. The Latitude/longitude of the extreme ML pillar coordinates should be marked in key plan. Wind rose diagram should be depicted.

Surface Plan:

13. UTM coordinates to be mentioned along with local coordinates along the grid lines. The features shown in the index is not distinguishably shown in the plan. Diverted forest area to be shown in the plan as well as marked in the index of the map. The UPL should be shown over the plan and in index. Necessary corrections to be done.
14. Surface right area and forest, non -forest area, diverted forest area should be shown
15. Few boundary pillars should be correlated with some permanent ground features giving distance and bearing/direction. Nomenclature of the existing waste and mineral reject dumps along with fines stack should be mentioned.
16. All the boundary pillars coordinates should be furnished in a tabular format. The Surface Plan should be prepared to satisfy the provision as laid down rule 32 (1) (a) of MCDR'2017.

Geological Plan & Section:

17. The surface geology of the lease area should be depicted on geological plan as discussed during the plan period.
18. In the Geological plan, the UTM coordinates should be mentioned along with local coordinates along the grid lines. Geological sections should be prepared from end to end of lease area so that entire lease area should be covered with a section interval of 100 m. The scale of part geological plan and sections should be same. The part plan and sections should cover the entire lease area.
19. Geological Plan should be updated with revised boreholes proposal as mentioned under future exploration program. The redefined UNFC boundaries and UPL along with UNFC code should be prominently shown in Geological Plan and sections. All the lithology within and outside the UPL to be shown in the Geological sections. Necessary corrections to be done in all the sections.
20. Geological sections should be revised. Particularly the resources/reserves should not be projected in the section if it is not proved through borehole. Necessary corrections to be done in Geological sections, calculations, text, tables etc.
21. The proposed boreholes to be plotted in dotted lines in Geological sections along with proposed borehole number, RL and proposed closing depth at the bottom of the borehole. The year wise proposal for drilling to be shown in different contrasting color in both Geological Plan and Geological sections. The year wise color of the boreholes proposed in Geological plan should match with the plotted proposed boreholes in Geological sections.
22. The index of Geological features should be same in both Geological Plan and all the Geological sections. In Geological Plan, longitudinal section line to be shown and a longitudinal section to be submitted.
23. The color of the UPL should be same in all plans and sections. In the Geological sections, the revised UPL and benches should be drawn properly. The blank area shown in geological sections above UPL should be filled with relevant lithology.
24. The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017.

Development plan & Section:

25. Quarry name, existing and proposed bench profiles, waste dump, backfilling proposal, mineral reject dumps etc. to be shown in the development plans and sections.
26. The lithology of the area should be clearly shown in year wise development plan and sections in the area proposed for development.
27. Each year development proposal for different blocks should be shown separately in different color. The UPL may be redefined and benching pattern of existing and proposed to be made in all development plans and sections. The UPL should be shown in Red color which should contrast to the year wise development proposal color shown in development plan and sections. The existing and the proposed quarry positions year wise should be properly demarcated.
28. The RL of the benches should be clearly shown in year wise development plan and sections. The profile of development sections should match with the contour of the respective plans.
29. Development sections should be equally spaced in the proposed development year wise plan and accordingly the respective sections should be submitted. the section interval should be 100 m.
30. A longitudinal section along the disposal of tailing pond should be submitted.

CONCEPTUAL PLAN SECTIONS

31. The conceptual plan should depict workings keeping in view of the validity of the lease period as proposed in the text. Conceptual longitudinal and T- sections representing the entire lease area should be submitted. dumps are shown in the mined out land i.e mining quarries. Whether it is backfilled or dumped should be clarified.

Environment plan:

32. The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017.
33. The proposed environment protective measures to be shown in environment plan. The drainage pattern of the lease area also to be shown on the plan. Air, water and noise monitoring stations to be shown in the plan. Wind rose diagram should be shown with predominate wind direction

Reclamation plan along with sections for the backfilling proposal.

34. Reclamation plan should be submitted as per IBM appraisal of mining plan describing the proposals to be implemented for reclamation and rehabilitation of mined-out land including the manner in which the actual site of the pit will be restored for future use. The proposals may be supported with yearly plans and sections depicting yearly progress in the activities for land restoration/ reclamation/rehabilitation, afforestation, protective measures etc,

DUMP PLAN AND SECTIONS

35. Dump sections should be submitted over the area of dump so that it should be covered fully and a longitudinal section along with T-sections should be submitted.

FA Plan/PMCP

36. The area under different heads of FA table should be properly shown in different hatching with present area and additional area in FA plan. The FA table should be furnished.

ANNEXURES

37. All the previously drilled borehole logs should be enclosed in format with the document. The lithology of the borehole logs should match with the lithology shown in Geological sections.
38. Resolution of board of Directors regarding nominated owner should be enclosed.
39. All the annexure to be properly numbered/paged and relevant annexure to be signed by Geologist/surveyor/QP etc. It is observed that many of the annexures are not legible. A legible copy of same to be enclosed.
40. Copy of bank guarantee should be enclosed. Photographs of boundary pillars should be enclosed.
41. Copy of quality of air, water, soil, noise and other environmental a parameters monitoring report of the last year should be enclosed.
42. The copy of the experience certificate in respect of the QP to be enclosed.
43. Original lease deed should be annexed.
44. Forest clearance documents should be annexed.

A. Anil
23/10/19