



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. MP/A/10-ORI/BHU/2020-21

Date: 14.07.2020

सेवामे

Shri Vinod Nowal, Nominated Owner,  
M/s JSW Steel Ltd,  
Plot No-468/1075, At- Sundara 13,  
Po- Barbil, Dist- Keonjhar,  
Odisha-758035

विषय: Approval of Mining Plan of Nuagaon Iron Ore Mine along with Progressive Mine Closure Plan (PMCP), over an area of 776.969 ha (As per DGPS)/ 767.284 ha (As per ROR) in Sundargarh district of Odisha State, submitted by M/s JSW Steel Ltd under Rule 13 of MCR, 2016.

- संदर्भ: - i) Your letter No. JSW/S/O/2020/90 dated 28.06.2020 received on 06.07.2020.  
ii) This office letter of even no. dated 06.07.2020.  
iii) This office letter of even no. dated 06.07.2020 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 Mining Plan along with Progressive Mine Closure Plan (PMCP) has been examined in this office by Shri Dayanand Upadhyay, Senior Asst. Controller of Mines & Shri Kewal Krishan, Regional Mining Geologist. 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 1 and submit **three (3) firm bound and two (2) soft copies of the document text in USB Pendrive/Flash drive 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 USB Pendrive/Flash drive)** within 7 (Seven) 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 final copies of 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.  
(हरकेश मीना) 07/07/2020  
क्षेत्रीय खान नियंत्रक

Copy for kind information and further necessary action to Shri Satish Mohanty, Shri Satrujit Kumar, Shri Pradeept Mohapatra, M/s JSW Steel Ltd, Plot No-468/1075, At- Sundara 13, Po- Barbil, Dist- Keonjhar, Odisha-758035.

(हरकेश मीना)

क्षेत्रीय खान नियंत्रक

**Scrutiny comments on examination of mining plan with PMCP of Nuagaon Iron Ore Mines over an area of 776.969 Ha in Keonjhar District of Odisha State of M/s JSW Steel Ltd**

**General**

1. The lease area 776.969 ha furnished on cover page and in text is as per ROR while according to lease deed the said is categorized under DGPS survey. It may be re-checked and corrected. The extent of lease area 776.969 Ha as per Letter of Intent and DGPS survey should only be mentioned, in the cover page and at all other places in the document. Need to do necessary corrections.
2. The mining plan submitted should be furnished under rule 16 (1) of MCR, 2016 and PMCP under rule 23 of MCDR, 2017. It may be corrected accordingly in all places of the text and plates. The lease period has not been furnished on cover page. IBM registration number and mine code if allotted should be mentioned on cover page and in General chapter at page no.-9.
3. All the corresponding documents details should be furnished in introduction like right from NIT, MDPA, auction bid details, vesting order, tender document etc., to the lease deed execution with Sate Govt. of Odisha and other Statutory Organization regarding the mining lease auction and subsequent execution have not been submitted along with document as annexures. The final price offer details as per Mineral Auction Rules 2015 should be provided in introduction with documentary evidence as annexure. Present status of all statutory clearances viz., EC, FC, CTO, surface right etc., have not been furnished with referring to documentary evidences as annexures.
4. The details regarding the use of mineral produced from the lease viz., whether the mineral to be used in the lessee's end use industry or will be sold in the open market should be elaborated. It may be described with plant capacity, its location in referrence to proposed ROM production and conditions imposed by state government regarding the same in introduction with documentary evidence.
5. The existing EC of the mines is 5.62 MTPA while the ROM production proposed is 7.99 million tonnes. Therefore it may be discussed to a get a fresh EC that lessee will applied further in light of proposed production.
6. Page no.-11, the coordinates of the boundary pillars as furnished has not been derived with easting, northing as well as latitude and longitude.
7. Lessee is a company. Hence, all certificates, undertakings, consent letter etc. should be signed by the nominated owner only. Extract from the minutes of the Board of director meeting of M/s JSW Steel Ltd with list of Board of Directors, their phone no. address and declaration of nominated Owner to be furnished. Name of the nominated owner should be furnished under name of the applicant.
8. The copy of the qualification & experience certificate in respect of the three Qualified Persons to be enclosed as per Rule 15 of MCR, 2016. The Identity proof may also be submitted.
9. The complete Geological Report including plates and annexure has not been submitted, it should be submitted with separate annexure. 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. All the information on cover page has not been furnished as per the IBM Manual 2014. 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.

**Geology and Reserve:**

10. All the geological information furnished should be as per the Geological report, as received from state government along with document. Detailed description of geology of the lease area such as shape and size of the mineral/ore deposit, disposition various litho-units indicating structural features if any etc. should be furnished. Average thickness of various litho-units encountered in the bore hole drilling are to be furnished.
11. In page no.25 in the summary of bore hole drills, the information regarding the depth of intersection of ore body i.e depth of top of ore body intersection and floor of the ore body intersections as per bore hole drilled should be incorporated.
12. Page no.-32, the lease area explored under different level of exploration as furnished in table is not matching with the geological report. It may be re-checked and corrected. The details of total lease area explored under UNFC levels have to be furnished in the tabular format provided below as on 31st March 2020.

Total Lease Area: ..... Ha		Lease area explored as per UNFC norms (in Ha) as on dt.....					Remarks/ comments including reasons for not carrying out the exploration as per UNFC norms
Item of Information	Total lease area = A+B+C+D+E					F	
	G1 Level	G2 Level	G3 Level	Explored and found non-mineralized with level of exploration	Un-explored lease area		
	A	B	C	D	E		
Area as per level of exploration							
No. of BH drilled							
No. of BH considered for Resource							
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: .....							

13. Page no.-43, As per Rule 22 of Mineral (Auction) Rules, 2015, the holder of a mining lease shall complete detailed exploration (G1 level exploration) and prepare a detailed feasibility study report conforming to Part IV and V of the Mineral (Evidence of Mineral Contents) Rules, 2015 over the entire area under the mining lease, within a period of five years from the date of commencement of such mining lease. Hence the entire lease is to be explored under G1 level of exploration. The Exploration proposal is to be furnished in tabular form (core boreholes), which should include Borehole no, year of drilling, Collar RL, coordinates and estimated depth in text the same are to be marked on the geological sections and plan.
14. In page no.45, the residual resources furnished as on 01/03/2020 which is to be revised upto 31st march 2020 based on the actual production made by the earlier lessee. The correction should be made in relevant page and accordingly reserve and resources should be furnished.
15. Page no-46, the details calculation of reserve and resources should be based on the updated geological plan and sections which were submitted with the geological report. Similarly in the said calculation table, bore holes considered on the section lines are to be furnished.
16. Page no.56, in the table mineral resources, the range of grade of the ore, under G1 and G2 level of exploration should be furnished. The Economic, Feasibility and Geological axis are not discussed in the text. It should be justified/discussed properly and then UNFC Codes are to be furnished.
17. Feasibility/Prefeasibility Study report conforming to Part V of Minerals (Evidence of Mineral Contents) Rules, 2015 has not been submitted particularly with reference to Cost and revenue factors such as the derivation of, or assumptions made, regarding projected capital and operating costs, the assumptions made regarding revenue including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, etc., the allowances made for royalties payable, both Government and private, Basic cash flow inputs for a stated period, Yearly planned production, Net Present Value (NPV) and Internal Rate of Return (IRR) of the deposit, intrinsic value of the deposit based on annual projected production. The payments to be made under rule 13 of Mineral (Auction) Rules, 2015, final price Offer of 95.20% have not been taken into account. The economic viability of the deposit is not carried out as per guidelines.

#### Mining:

18. Page no.57 & 58, the details of existing quarries in terms of their length width, top RL and bottom RL have not been updated and same figures of approved modification of mining plan which was earlier approved on 23/04/2018 have been furnished. Similarly the details of existing dumps have also been not updated. All the parameters of existing quarries and dumps should be updates based on recent survey.
19. Justification of site selection proposed for mining are to be furnished with respect to advancement of pits, targeted quantity and its average grade in view of scientific mining. 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.
20. Page no.-60, insitu tentative excavation as furnished in table should be described with average recovery percentage of mineral reject. The bulk density considered for waste should also be furnished.
21. The tentative year wise proposal of development program should be based on the field survey after 31st March 2020 so the exact position of the development of benches, RL wise already carried out and further proposed earlier, should not be overlapped and mismatched.
22. Page 75, briefly describe 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.
23. In conceptual mining plan, the life of mines has not been furnished correctly considering the mineable reserve as on 31st March 2020. Cumulative waste generation and backfilling and protective measures should be furnished properly. Restoration of safety zone, dead dump and slope of the dump may describe properly.
24. In pursuant to the order dated 14.01.2020 passed by MoM, GoI, consequent up on the order dated 08.01.2020 of the Hon'ble Apex Court passed in W.P.(C) No. 114/2014, the lessee shall carryout "regrassing in mining area after closure of mines". Accordingly it should be discussed during conceptual period.

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

25. Proposed Sub-grade dump and waste dump have not been described with its location along with their RL and co-ordinates in text. The top RL and its extension year to year basis have not been depicted clearly on plans in different color codes. Further, Build-up of dumps from year to year have not been mentioned in text w.r.t. designed capacity of dumps, bottom and top mRL of individual terrace, dump slop, individual terrace height and slope with description of method & manner of disposal of waste.
26. The proposal for construction of retaining wall, garland drain may furnish year wise in different color codes in terms of their length width and height. It has not been mentioned that the proposed area for waste disposal and subgrade/mineral reject dumping, is proved for non-mineralization or not. All the proposed dumps should be outside the UPL. If any existing dump lies within UPL, therefore their handling proposal should be proposed in view of conservation and scientific development of mineral. Need to do necessary corrections.
27. The proposed dumping of mineral reject will not be allowed over the existing mineral reject dumps created by earlier lessee within the stipulated time frame as allowed by State Govt. to remove it in favor of earlier lessee as per rule. Therefore proposal may be revised accordingly.

#### **USE OF MINERAL and MINERAL REJECT:**

28. Use of the proposed produced mineral should be in line with the terms and conditions specified in any of the relevant document by State Government regarding the use of the same. Copy of the same document should be enclosed.
29. Describe briefly the requirement of end-use industry specifically in terms of physical and chemical composition of the mineral with documentary evidence. 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. 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 Reject:**

30. It is mentioned that to upgrade the low grade ore a 2.0 MTPA capacity beneficiation plant has been established. However the flow chart of the proposed wet beneficiation plant has not been furnished. The details should be furnished in terms of annual feed of low grade ore, recovery percentage, upgraded grade of low grade ore and manner of disposal of reject/tailings with its grade.

#### **PROGRESSIVE MINE CLOSURE PLAN:**

31. Baseline information of the lease area has not been described as per guidelines. Further, base line information to be furnished for surrounding 500 meter form lease boundary. Page-119, socio economic para should be described with population of nearby villages, male female ratio, rate of literacy with their occupation and employment. Proposed monitoring station of air, noise and water should be described in text and their locations furnished in tabular form.
32. 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. Page-120, Para-8.3, backfilled area and reclamation and re-habilitation carried out earlier should be elaborated along with further the proposed backfilling, reclamation and re-habilitation.

#### **PLATES (General):**

33. Lease plan in favor of lessee (M/s JSW Steel Limited) authenticated by competent authority of state government has not been submitted. DGPS survey lease plan as submitted has not been authenticated by competent authority of state government.
34. Plans and section has been prepared on the scale 1:5000. However the permission of scale relaxation under rule 31(d) of MCDR, 2017 has not been obtained.
35. Plans and sections should be updated based on survey after 31.03.2020. All the tables where figures needs to be recalculated and updated. Need to do necessary corrections at all relevant places in the text and plates annexures and in mine prefeasibility report.
36. 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.
37. With reference to CCOM Circular No 2/2010 and its addendum, the geo-referenced mining leases map superimposed on latest high-resolution satellite data has not been submitted. The existing and proposed bench positions clearly with mRL to be mentioned in the all plans and sections.
38. 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.
39. All plans and sections should be signed with date by certified Surveyor, Qualified Person, Mine Manager, Mining Engineer and Mining Geologist.

#### **Key Plan:**

40. The key plan has not been prepared as per the provision of rule 32 (5) (a) of MCDR 2017 particularly the boundaries of all villages and towns with their population, forests with tree density, approach road to lease area, Latitude/longitude of the extreme ML pillar coordinates etc. have not been marked in key plan.

#### **Surface Plan:**

41. 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. Surface right area and forest, non -forest area, diverted forest area have not been shown. 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.
42. 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:**

43. The geological plans and sections which were submitted with Geological report should be updated as on 01.04.2020 survey and to be submitted. The Geological Plan should be prepared to satisfy the provision as laid down rule 32 (1) (b), (c) and (d) of MCDR'2017. Need to do necessary corrections. mRL should be mentioned on sections. Vertical scale of the sections should be in line with scale of the section. UPL should be shown in geological sections. Need to do necessary corrections. Lease boundary is to be marked as per standard symbol. Dip & strike is to be marked clearly. Area under G1/G2.. should be demarcated and UNFC codes are to be depicted in geological sections as per MEMC rule 2015.
44. The revised exploration as mentioned should be incorporated in geological plan. 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. Longitudinal sections have not been submitted. Need to submit the same.

**Development plan & Section:**

45. Quarry name, existing and proposed year wise bench profiles, waste dump, backfilling proposal, mineral reject dumps etc. to be shown in the development plans and sections including legend.
46. The lithology of the area should be clearly shown in year wise development plan and sections in the area proposed for development. In development plan, proposed benches RL should be clearly depicted. UPL should be revised based on latest survey. Proposed infrastructure and waste dumping should be furnished year to year basis in different color codes. The nomenclature of existing and proposed dumps should be clearly marked. In development section progress of dumping and others protective measures should be clearly depicted.

**Environment plan:**

47. The Environment Plan as prepared should be satisfy the provision as laid down rule 32 (5) (b) of MCDR'2017. The contours are not shown all along the 60m zone from the lease boundary. Further, the contour values are not prominent. Need to do necessary corrections.

**Reclamation plan**

48. 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.

**Financial Assurance Plan**

49. 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.

*K. Anis/ae*  
14/7/2020

*[Signature]*  
14.07.2020