

SCRUTINY OF DRAFT REVIEW OF MINING PLAN IN RESPECT OF GORGAON LIMESTONE MINE (228.46 HA) IN VILLAGE GORGAON, DISTRICT GARHWA, STATE JHARKHAND OF M/S STEEL AUTHORITY OF INDIA LTD. SUBMITTED UNDER RULE- 17(2) OF MCR, 2016

TEXT

- (1) In the cover page, category of the mine, the mining lease area with area in forest and non-forest and the period of proposal in financial year should be mentioned as per the guidelines given in the IBM appraisal of mining plan, 2014 and few good photograph of quarries within the lease area may be given in front cover page.
- (2) The numbering of chapters / paras have not been followed in the text of the document submitted for approval as per the universal format for mining plan given in the IBM appraisal of mining plan, 2014. The numbering of chapters / paras should be made accordingly.
- (3) The consent letter / undertaking /certificate from the applicant, the certificate from the person qualified to prepare the review of mining plan and the list of plans and sections submitted along with the document should be enclosed in Part-B as per the guidelines given in the IBM appraisal of mining plan, 2014.
- (4) The DGPS surveyed map / report has not been submitted along with the document in compliance to CCOMs circular No.2/2010 and its addendum dated 21/09/2011 and 11/06/2014 regarding geo-referenced cadastral map. Undertaking with regards to maintenance of boundary pillars as per rule 12 (V) of MCR, 2016. Few photographs of Boundary pillars showing pillar no with coordinates may be attached.
- (5) Authenticated lease map by Competent Authority Showing nature of Government land including Forest Area/Jangal jhari etc. In case of Forest/Jangaljhari NOC from the competent authority may be attached. In case of Forest/Jangaljhari NOC from the competent authority may be attached.
- (6) As per Govt of Jharkhand letter dated 18.03.2015 lease has been extended up to 31.03.2020 but proposal given in the document 01.04.2017 to 22.10.2022, may be justified. Copy of the letter should be annexed. Further, as per DC Garwa letter dated 01.03.2017 copy of the supplementary lease deed may be annexed.
- (7) Page-7, Table 1: Presently mining operation in Gorgaon lease is discontinued for want of environmental clearance, whereas the status of working of Gorgaon lease has been shown as 'working', under status of approval of mining plan it is mentioned as 'under process of approval' instead of furnishing actual date of approval of last mining plan/scheme of mining approved by IBM and under remarks it is mentioned as 'under deemed extension, 1st renewal period instead of furnishing period of extension of lease period as per the Mines and Minerals (Development and Regulation) Amendment Act, 2015. Same should be corrected. Similarly in the other leases of the company, correction / rectification should be made accordingly.
- (8) Page-11: The rule no. for the person (Geologist and Mining Engineer) employed in the mine should be corrected.
- (9) Page-13: In table 1, 'Area in hectares' and in table 2, 'type of land should be mentioned instead of 'NA'.
- (10) Page-14: The three leases of the company namely Gorgaon, Ghagra and Saraiya are contiguous and having common boundary. Therefore the numbering of boundary pillars for all the three leases should be uniform and co-ordinate should be given accordingly.
- (11) Page 15: table no. 5: Mining plan approved under rule 11 of MCDR, 1988 vide letter dated 30/10/2012 for the period from 2012-13 to 2031-32 appears to be wrong and should be corrected. The copy of approval letters to be enclosed. The annexure no. of the approval letter should be mentioned in the table for ease of reference.

- (12) Page 15: Details in respect of number of pit proposed for production, location of development and deviation if any should be discussed.
- (13) Page 18: Table no. 10: production has not been reported for the period from 2014-15 to 2016-17. How the stripping ratio furnished for the above period?
- (14) Page 18: Table no. 12: Details of the plantation proposed to be carried out during the period from 2012-13 to 2016-17 have been furnished. Against the total plantation of 12500 saplings only 500 plantations have been shown. The reason for not achieving the target should be discussed.
- (15) Page 20: Under the status of compliance of violations pointed out by IBM, it is only mentioned 'Annexure-XX'. Details of the violation, show-cause notice issued by IBM and its compliance position for the last five years should be given in a tabular form. The copies of such letters should also be enclosed as annexure to the document.
- (16) Page 20: Table no. 14: Under geology and exploration, category of reserve / resource as on 01/04/2017 as per UNFC classification furnished which should be furnished as per table given in the IBM appraisal of mining plan, 2014.
- (17) Page 23: Exploration: It is mentioned that the area has been explored in detail at 100m x 100m grid upto 185 mRL. Year of exploration has not been mentioned. Under this para it is mentioned that 3 nos. of boreholes (PBH-1, PBH2 and PBH-3) were proposed during 2011-12 and now planned for the period 2013-14. As the proposed period already lapsed, same should be corrected. The reason for not drilling the earlier proposed boreholes should also be discussed.
- (18) Page 24: Table no. 15: Under details of sample analysis it is mentioned 'for borehole log please refer annexure-XI'. The average grade of limestone given under table 15 has not been supported with the analysis report from NABL accredited laboratory. In support of chemical analysis of samples, the analysis report enclosed in annexure XXV is of 09/05/2012. A fresh analysis report from a NABL accredited laboratory should be enclosed. The NABL certificate of accreditation along with scope of accreditation of the laboratory should be attached in the document.
- (19) Page 26: (a) Total estimated mineral reserve / resource as per UNFC classification given as on 01/04/2016 whereas in page 20, reserve / resource as per UNFC classification given as on 01/04/2017. The year of calculation of reserve / resource should be corrected.
- (b) Total estimated mineral reserve /resources in different categories of UNFC not furnished as per the table given in the IBM appraisal of mining plan, 2014.
- (c) Forest area has not been demarcated on the relevant plans including geological plan.
- (d) The area considered for reserve estimation showing proved and probable zone has also not been marked on the geological plan and sections.
- (e) Area explored under different level of exploration should be marked on the geological plan and UNFC code for area considered for different categories of reserve / resource estimation should also be marked on the geological sections. Reserve may be calculated as per UNFC norms separately for Forest and non-forest areas. Tonnage calculation sheet on the basis of field test may be enclosed. Area considered for G1 & G2 as per UNFC may be shown on Geological Plan in different colour scheme. Mineral reserve and Resources table, Insitu Tentative excavation table, Dump rehandling table as per IBM manual may be given. In view of the above, the reserve / resource estimation should be re-oriented.
- (20) Page 26: (a) It is mentioned that 4 nos. of boreholes have been proposed to be drilled during 2013-14 whereas in page 23 there is proposal for 3 no. of boreholes during 2013-14. The proposed period and no. of boreholes should be corrected. One more column 'year of drilling' should be added giving location of proposed boreholes.

- (b) Page 26: Under the chapter mining, nothing has been discussed about existing status of quarries, their dimensions, existing status of dump, reclamation, rehabilitation and plantation etc. Same should be discussed.
- (c) Year wise development proposal for each year furnishing name of the quarry / pit proposed to be developed / extended, location co-ordinates of proposed workings, direction of advancement of quarry faces, production of ore, generation of OB / waste, stripping ratio etc. should be discussed.
- (d) The recovery percentage of limestone has not been mentioned. Same should be furnished by adding one more column in the table of year wise production proposal for ease in monitoring.
- (19) Page 30: Table no. 23: Under year wise production, financial year should be mentioned. The dimension of all the benches should also be mentioned in the table.
- (21) Page 32: Table no. 25: Calculation for drilling, explosive requirement for OB / ore zone, transportation (table 30), loading equipment (table 28) should be given in the table.
- (22) Page 33: Table no. 26: Explosive requirement per month for ROM zone blasting and total explosive requirement per month has been given as 'NA'. The requirement of explosive should be given.
- (23) Page no. 33: Calculation for arriving powder factor 11 t/kg for ore and OB may be explained.
- (24) Page no. 34: Table 27: The license for storage of explosives should be attached in the document.
- (25) Page no. 39: Table 34: Under reject dumping plan in next five year it is mentioned as 'Not Avl.'. Instead of not available, no generation of mineral reject should be mentioned.
- (26) Page no. 42: Table 36: The mine is category-A (OTFM). Proposal for a full time mining engineer holding degree in mining engineering and a geologist holding post graduate degree in geology as required under rule 55 of MCDR, 2017 should be given.
- (27) Public buildings, places of worship and monuments: Page no. 43: Nothing has been mentioned in the text whereas on the surface plan a Shiva hill has been shown near the North West side of the main quarry. A place of historical / religious worship (Lord Shiva) is located under the Shiva hill. Same has also been observed during the inspection of the mine. A violation cum show cause notice for the violation of rule 9(2)(a) of MCDR,88 was issued vide this office letter no. JHK/GAR/LST/360/RRO dated 24/03/2014 to stop mining activities around 50m of the Shiv hill due to religious worship under the Shiva hill. Details should be discussed under this item.
- (28) Page no. 46: Under information on protective measures for reclamation and rehabilitation, no year wise proposal for afforestation has been made for the review period. Only proposal for 12500 no. of plantation of saplings has been made. Year wise proposal for afforestation giving no. of plantation, location of plantation, species etc. should be furnished.
- (29) Financial Assurance: The financial assurance shall be furnished as per rule 27 of MCDR, 2017. The amount of financial assurance submitted earlier if any should also be mentioned.
- (30) No photographs of the lease area have been submitted. Few coloured photographs with caption for existing quarry, dump, boundary pillars, existing exploration, reclaimed area & afforestation etc. should be submitted along with the document.
- (31) There are so many typographical errors on the text which should be corrected.
- (32) The annexures should be arranged in order.

PLATES

(1) The lease area plan of Gorgaon lease has not been submitted along with the document authenticated by the competent authority of State DMG.

(2) Air station near Bhawanathpur township (A1), Noise quality monitoring station near hospital OPD (N4) shown under water catchments as per index, should be checked.

(3) **Surface Plan (Plate no. II):** i) All plan & section should prepared as per rule 32 of MCDR 2017. ii) There is no date of survey in the plan, which should be mentioned. iii) There is forest area within the lease but the forest area has not been shown / marked properly in the surface plan. iv) 7.5 mt. barrier zone has not shown in the northern side of the lease. v) At least three ground control points situated outside the lease area should be selected and latitude & longitude of these ground control points should be furnished. These ground control stations should be linked with the boundary pillars.

(4) **Plate no.-2.(Geological plan & Section) & Development plan and Sections:**

a) As per manual Geological sections may be prepared on natural scale of Geological plan at suitable interval across the lease area from boundary to boundary.

b) Geological plan prepared on 1cm:400m scale whereas Geological section prepared on 1:2000, Permission granted by CCOM, IBM regarding change of scale may be enclosed. Geological plan signed by Sri RK Jha who is retired DGM. Latest surveyed geological map may be provided as i this plan is surveyed dated 21.08.2013.

c) Reserve estimated as per UNFC (G1/G2) may be marked on Geological plan with different colour scheme.

d) Geological Plan and section do not match. Colour scheme of sections do not match with geological plan.

e) Existing benches in quarry with RL not given. Existing Dumps with RL and area Reclaimed and Rehabilitated etc may be shown on Geological plan.

f) Amalgamation of lease, order if any available may be attached as mining activity shown beyond lease area and 7.5 m safety zone.

Photographs of boundary pillars with coordinates towards western and eastern side of the lease area may be attached.

(5) **Geological plan and section:** i) The Geological plan of Gorgaon lease has not been submitted along with the document. ii) All sections should be matched properly with the geological plan. iii) Some colour codes shown in the section are not marked in the index. iv) Safety barrier not shown in the sections. v) Section line should be shown from the lease boundary. vi) RL should be shown both sides of the section.

(6) **Development Plan, 2017-18:** i) There is forest area within the lease but the forest area has not been shown / marked properly on the plan. ii) The proposed excavation planning during the year has not been shown in the index which should be shown properly on the plan as well as in the index.

iii) The proposed plantation for the year 2017-18 has not been shown on the plan and also in the index. Accordingly the development plan submitted for the year 2018-19 to 2021-22 and other relevant plans should be revised.

(7) **Pit sections (plate no. X):** In the index, proposed pit positions shown for the year 2012-13 to 2016-17 which should be corrected.

(8) **Environment management plan (Plate no. XV):** Year wise afforestation proposal should be shown on the plan instead of showing proposed afforestation at the end of 5th year.
