

भारत सरकार
खान मंत्रालय
भारतीय खान ब्यूरो
क्षेत्रीय खान नियंत्रक का कार्यालय

No. FMCP/OTFM/01-ORI/BHU/2017-18

Plot No. 149, Pokhariput
Bhubaneswar – 751 020
Date: 28.06.2017

To

The Nominated Owner,
Ferro Alloys Corporation Ltd,
Laxmi Bhawan, Kuans,
Bhadrak, Odisha – 756100

Sub: Approval of Final Mine Closure Plan of Boula Chromite Mine over an area of 187.03 ha in Keonjhar district of Odisha State, submitted by M/s Ferro Alloys Corporation Ltd under Rule 24 of MCDR, 2017.

Ref: - i) Your letter No. BCM/FMCP/2017 dated 19.05.2017 received on 07.06.2017.
ii) This office letter of even no. dated 08.06.2017.
iii) This office letter of even no. dated 08.06.2017 addressed to Director of Mines, Government of Odisha copy endorsed to you.

Sir,

This has reference to the letter cited above on the subject. The draft of Final Mine Closure Plan(FMCP) has been examined in this office based on site inspection carried out on 22 & 23.06.2017 by Shri G C Sethi, Deputy Controller of Mines and Shri S R Mazumdar, Senior Mining Geologist. The deficiencies observed are enclosed herewith as Annexure I.

You are advised to carry out the necessary modifications in the draft Final Mine Closure Plan in the light of the contents vide Annexure I 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 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 Final Mine Closure 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 Final Mine Closure 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 modified copies of the Final Mine Closure Plan. It may be noted that no extension of time in this regard will be entertained and the Final Mine Closure 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 / yours faithfully,

(HARKESH MEENA)

क्षेत्रीय खान नियंत्रक / Regional controller of Mines

SCRUTINY COMMENTS ON EXAMINATION OF FINAL MINE CLOSURE PLAN OF BOULA CHROMITE MINES OF M/S FERRO ALLOYS CORPORATION LTD., OVER AN EXTENT OF 187.03 HECTARES, LOCATED IN VILLAGE DHANURJAYAPUR OF KEONJHAR DISTRICT, ODISHA STATE, SUBMITTED UNDER RULE 24 OF MCDR, 1988.

(1)(i) In the front cover, the FMCP has been submitted under Rule 24 of MCDR, 1988, which is not correct, thereby the exact rule & sub-rule of MCDR, 2017 may be mentioned. (ii) The final mine closure plan has been submitted with effect from 08.02.2012, which is meaning less as the FMCP is required to be submitted before two years of the final closure of the mine. (iii) Full address of the company is missing and the registration number allotted under Rule 45 of MCDR, 1988 also not furnished.

(2) (i) The consent letter from the nominated owner of the company has not been enclosed, which should be submitted. (ii) The copy of the resolution of the Board of Directors nominating a person as owner of the company also not submitted. (iii) A certificate from M/s Ferro Alloys Corporation Ltd. has been submitted without the signature of the nominated owner assigning to prepare the FMCP to Shri Mithilesh Choudhary as key person ,which is not acceptable. (iv) Shri Mithilesh Choudhary is suspected to be the qualified person but the requisite qualification, experience & I.D proof in favour of Shri Choudhary has not been enclosed.

(3) (i) Summery of Lode wise reserves & resources as on 01.04.2014 has been computed as per the enclosed annexure-2; instead the updated reserves/resources as on 0.1.04.2017 should be computed and furnished. Besides, details of exploration carried out in the four lodes i.e. Laxmi, Durga, Shankar & Ganga to be submitted in tabular form. (ii) The mine was temporarily discontinued with effect from 09.02.2012, whereas, the reserves estimated as on 01.04.2014 with drastic enhancement under proved and probable categories against the approved scheme of mining without any valid exploration data. Proper justification for the same may be given.

(4) The report on air quality analysis conducted by M/s FACOR for the period from April 2011 to March 2012 has been enclosed as annexure-3 but such old reports are not acceptable, thereby fresh analysis report in support of Ambient air quality analysis report from a NABL accredited laboratory or from a Govt. laboratory for last four quarters only need to be submitted.

(5) The drinking water and effluent water analysis report from M/s FACOR for the period from April 2011 to March 2012 has been enclosed as annexure-4 but such old reports are not acceptable, thereby fresh analysis report in support of water quality analysis from a NABL accredited laboratory or from a Govt. laboratory should be submitted replacing the enclosed one for ease in monitoring.

(6) The sound pressure level measurement both for buffer zone & core zone measured in house for the period from April 2011 to March 2012 has been enclosed as annexure-5 but such old reports are not acceptable, thereby fresh report in support of the above analysis either from a NABL accredited laboratory or from a Govt. laboratory may be submitted.

(7) The chemical analysis report in support of the grade of chromite from Mitra S.K Ltd., has been enclosed as annexure-7 but the certificate of accreditation from NABL in favour of Mitra S.K Ltd., has not been enclosed. Besides, the analysis reports are very old, analysed on 14.01.2015 & such old report is not acceptable. Therefore, the fresh analysis report should be submitted replacing the enclosed one.

(8) The proposed protective reclamation & rehabilitation measures for the period from 2013-14 to 2017-18 of the progressive mine closure plan has been furnished as annexure-8 but there is no valid mining plan/scheme of mining for the aforesaid period. Besides, the achievements for the proposed

protective reclamation & rehabilitation measures for the period from 2013-14 to 2016-17 also not furnished.

(9) The copy of the lease deed both for Chromite & PGE minerals have not been enclosed, which should be submitted. Besides, few photographs of the lease area showing different mining activities may also be submitted.

(10) Full postal address of the lessee is missing, which should be furnished indicating the postal PIN code, phone/fax/e-mail ID etc. for more informative. Accordingly, the address of the applicant furnished in para 1.3 may also be revised. (Para 1.0)

(11) Under the heading, **method of mining**, it is mention that, earlier chromite was mined out by mechanized opencast method and presently, mechanized underground mining method is adopted but the existing details of the opencast & underground workings has not been given, which should be furnished and the page under reference may be revised accordingly. (Page No. 2)

(12) The FMCP is stated to be submitted based on the court proceeding, dated 12.01.2016 but a copy of the same has not been enclosed along with the document, which should be submitted for more informative. (Para 1.1)

(13) Under the heading **lease condition**, it is mentioned that, no special condition was imposed at the time of execution of the lease deed, instead all the conditions imposed in the lease deed is required to be furnished. (Para 1.2)

(14) The conditions imposed in the mining plan/scheme of mining has been furnished in the para under reference but the copies of approval letter of the mining plan/scheme of mining approved in different occasions has not been enclosed and the same should be submitted for more informative. (Para 1.2)

(15) Shri Mithilesh Choudhary has prepared the FMCP as indicated in the para under reference but the requisite qualification and experience in support of Shri Choudhary has not been enclosed. Besides, the address proof & ID proof in favour of him also not enclosed. (Para 1.3)

(16) The mineral beneficiation facilities adopted in the mine including sorting, sizing & blending etc. should be discussed instead of mentioning **no beneficiation at the site** and the para may be revised accordingly. (Para 2.4)

(17) The proposals of the scheme of mining has been reviewed only for three years i.e. from 2011-12 to 2013-14, instead the status for the same upto the financial year 2016-17 may be submitted. (Para 2.5)

(18) The proposed and actual status of the saplings planation has been furnished in tabular form but the location co-ordinates of actual planation done should be furnished by adding one more column in the table given in the page under reference for more informative. (Page No. 11)

(19) The proposed and actual reclamation & rehabilitation status of the mined out area has been furnished in tabular form but the location co-ordinates of actual reclamation & rehabilitation done should be furnished by adding one more column in the table with proper plate reference. Besides, the status of violation letter, show-cause notice issued by IBM during last five years & the compliance submitted by the company thereof may also be submitted for clarity. The copies of such letters may also be enclosed as annexure to the FMCP. (Page No. 11)

(20) The existing status of land degraded in different counts such as pit (opencast & underground), dump, stack, reclamation & rehabilitation and afforestation etc. has not been given, which should be furnished. All should be presented in tabular form and rest of the things may be erased. (Para 4.1)

(21) (i) The details of the existing surface and ground water bodies available in the lease area and the measures to be taken for protection of the same including control of erosion, sedimentation, siltation, water treatment, diversion of water course etc. should be furnished. (ii) Measures adopted for protection of ground water from leaching may also be furnished. (iii) Quality of surface water bodies should be indicated and corrective measures proposed to meet the water quality conforming the permissible limits should also be discussed. (iv) Report of hydrological study carried out if any should be furnished. (Para 4.2)

(22) The current air quality status of the lease area should be furnished. Besides, the corrective measures proposed to be adopted for prevention of air pollution should be discussed. (Para 4.3)

(23) (i) Existing status of quantity & quality of overburden & waste materials available in the mine should be furnished including their practice of disposal/utilisation and the manner of stabilization. (ii) Protection measures adopted for prevention of siltation, erosion and dust generation from the waste materials may also be discussed. (Par 4.4)

(24) The status of availability of topsoil in the lease area should be clearly indicated and the para may be revised accordingly. (Para 4.5)

(25) Details of infrastructure developed in the lease area should be furnished and the para may be revised accordingly. (Para 4.7)

(26) Existing status of machineries deployed in the mine should be furnished. Besides, no specific information of machinery deployment is found in the refer para 2.3. (Para 4.8)

(27) Safety & security arrangement made in the mine has not been discussed, which should be furnished and the para may be revised accordingly. (Para 4.9)

(28) The disaster management & risk assessment plan of the mine should be discussed. Moreover, the name & contact number of the person responsible during the emergency should be furnished. Besides, nearest fire stations, hospitals and police station is required to be mentioned for more informative. (Para 4.10)

(29) In the para under reference, it is mention that, **the mine has been permanently discontinued due to the court proceedings**, but as per the guidelines for FMCP, the activities normally undertake during the temporary discontinuance period should be furnished. Besides, the employment status of workers during such discontinuance may also be indicated. (Para 4.11)

(30) Tentative time required for abandonment of the mine has not been furnished in refer annexure-1, which should be furnished. (Para 6.0)

(31) No reclamation & rehabilitation measures for the mined out area has been proposed for the land affected by mining operations and not a single photograph in support of such activities has been enclosed, which should be submitted and the para may be revised accordingly by giving proposal for reclamation and rehabilitation of the land affected by mining operations . (Para 7.0)

(32) The Financial assurance has been computed over an extent of 114.61ha @ Rs. 25000/ha, which is not correct, thereby the enhanced Bank Guarantee at the rate of Rs.300000/- per hectares of area put to use should be computed as the mine falls under category A(OTFM) as per the Rule 27(1) of MCDR, 2017. Accordingly, the financial assurance in the form of Bank Guarantee may also be submitted. (Para 8.0)

(33) The plan & sections submitted along with the final mine closure plan should be certified by the Qualified Person indicating that, the plans and sections are prepared based on the lease map

authenticated by the State Govt. of Odisha. Besides, Shri M.K. Pujari, RQP has been signed in all the plates but it is reported that Shri Pujari has already expired last year.

(34) Drawing No.1 (Key Plan showing Location & Topography): The details of the deficiencies found on the plate are as follows: (i) The plan has been drawn with 10km radius from the lease area but 5km radius of the lease area has not been marked. (ii) Direction of flow of river/nallah is missing on the plan portion of the plate. (iii) The road shown on the plan is for village road or for public road should be specified. If the road is public road, to which important places both end of the road leads to may be marked. (iv) The index reference given for air, water, noise and soil monitoring stations are not clearly marked. (v) The population of the villages falling within 5km radius of the lease area has not been marked on the plan & the index reference for the same also missing.

(35) Drawing-1(B)(Geo-referenced Map): (i) The covering letter of Geo referenced map from ORSAC has not been enclosed. (ii) The mining lease has been granted and executed over an extent of 187.03ha but the Geo referenced map has been prepared over an extent of 186.996ha, which is not matching with the extent of lease area. (iii) Further DGPS map of the lease area should be certified by the State Govt. authorities.

(36) Drawing No. 2 (Surface Plan): (i) The index reference given for Abandoned Quarry is not to be seen on the plan portion of the plate. (ii) The index for the ore stack yard depicted on the plan is missing, which should be furnished. (iii) The plan has been drawn with 500m grid interval; instead the same should be drawn in 100m grid. Accordingly, the grids for all other plates may also be re-drawn. (iv) Pillar co-ordinates of all the lease boundary pillars have not been furnished and the same may be given in tabular form. (v) The existing infrastructures such as residential quarters depicted on the plate are not in existence as found during the inspection. (vi) Date of survey of the area is mentioned to be on 15.01.2014, which indicates that, all the existing features depicted on the plan are updated as on 15.01.2014, thereby the plan should be updated as the date of preparation of final mine closure plan. (vii) Surveyor's signature is missing on the plate and the same should be signed by a competent surveyor. (viii) Atleast three permanent ground control stations outside the lease area have not been selected and latitude & longitude of these stations have not been furnished. Besides, these ground control stations need to be linked with the boundary pillars. The plate may be revised accordingly.

(37) Drawing No. 2A (Surface Geological Plan): (i) A good number of already drilled boreholes have been marked on this plan but litho logs for the same have not been submitted. Besides, no photographs in support of litho logs of such boreholes also enclosed. (ii) The plate for updated transverse geological sections has not been submitted. (iii) Details of explored & un- explored area should be furnished in tabular form on the plate.

(38) Drawing No. 4 (Environment Plan): The exiting features available within 500m radius of the lease area have not been depicted, which should be marked. Besides, the index reference given for soil, noise and metrological stations are not to be seen on the plan portion of the plate.

(39) Drawing No.5 (Conceptual Plan & Sections): The land use of different counts by 2034 has been furnished in the last column of the table; instead the same upto the final closure of the mine should be furnished.

(40) Drawing No.8 (Reclamation Plan): (i) The plate has been submitted depicting the reclamation & rehabilitation programme for the period from 2013-14 to 2017-18, which is not correct, as the years 2013-14 to 2016-17 has already lapsed. Therefore, the reclamation & rehabilitation work proposed to be implemented during the final closure of the mine only need be furnished and rest of

the things should be erased. (ii) The fencing proposal the opencast quarries such as Durga, Laxmi, Shankar & Ganga have not been depicted with different colour codes. (iii) Suitable proposal for sealing the opening of adits for Laxmi & Durga and Inclines in Durga & Shankar also not given. In the light of the above, the plate may be revised. (iv) The table furnished for the period from 2013-14 to 2017-18 is uncalled for, instead the item wise reclamation, rehabilitation and restoration proposed during the final closure should be depicted with different colour codes. Besides, the extent of area proposed for each of the activities to be furnished in tabular form indicating the financial year of the closure. Accordingly, corresponding incorporations may also be made in para 7.0 in the text.

(41) Drawing No.9 (Financial Area Assurance Plan): On the plan, the date of survey is indicated to be on 15.01.2014; thereby the existing land use furnished in tabular form is upto the date of survey of the lease area and the extent of existing land use has not been updated as on date of the submission of FMCP. Besides, certain proposed land use items, which are not required during the final closure of the mine should be shown only against the existing land use. Accordingly, the plate submitted for Reclamation Plan may also be revised.