

**INDIAN BUREAU OF MINES
MINERALS DEVELOPEMMENT AND REGULATION DIVISION**

MCDR INSPECTION REPORT

Ranchi regional office

Mine file No : BIH/LOH/BX/233/RRO

Mine code : 07BHR33015

- (i) Name of the Inspecting : **B001**) **SAGAR BODRA**
Officer and ID No.
- (ii) Designation : Assistant Mining Geologis
- (iii) Accompanying mine : Shri Rajan Khalko, Representative of lessee.
Official with
Designation
- (iv) Date of Inspection : 28/01/2019
- (v) Prev.inspection date : 28/12/2017

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **PAKHAR (50.65)**
- (b) **Registration NO.** : **IBM/4115/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : JHARKHAND
District : LOHARDAGA
Village : PAKHAR
Taluka : KISKO
Post office : NARIHAWADIH
Pin Code :
FAX No. : N.A.
E-mail : N.A.
Phone : 06526-224310
- (f) Police Station : KISKO
- (g) First opening date : 16/05/1990
- (h) Weekly day of rest : MON
2. Address for : VILL-PAKHAR
correspondance : PO-NARINAWADIH, KISKU
AT/PO-LOHARDAGA
3. (a) Lease Number : BHR0217
- (b) Lease area : 50.64
- (c) Period of lease : 20
- (d) Date of Expiry : 17/04/2010
4. Mineral worked : LATERITE Associated
BAUXITE Main

5. Name and Address of the

Lessee : GANDHARVA ORAON
 COURT ROAD, NEAR N.H.
 SCHOOL, LOHARDAGA LOHARDAGA
 JHARKHAND
 Phone:
 FAX :

Owner : GANDHARV ORAON
 COURT ROAD NEAR N.H.HIGH
 SCHOOL PO/DIST-LOHARDAGA
 LOHARDAGA JHARKHAND
 Phone:
 FAX :

Mining Engineer

Name : GANGADHAR TIWARY, Full Time
 Qualification : B.E. (MINING)
 Appointment/ :
 Termination date

Geologist

Name : RAJA SINGH, Full Time
 Qualification : M. Sc. (Geology)
 Appointment/ : 18/05/2015
 Termination date

| | | | |
|-------------------------------|---|--------------------------------|------------|
| 6. Date of approval of Mining | : | Fresh under rule 22 MCR1960 | 27/03/1989 |
| Plan/Scheme of Mining | | Mining Scheme rule 12 MCDR1988 | 09/10/1998 |
| | | Renewal under rule 24 MCR1960 | 21/06/2013 |
| | | MP modif under MCR 1960 | 01/06/2016 |

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|--|---|---|---------|
| 1a | Backlog of previous year | As per approved document, valid for the plan period 2015-16 to 2019-20, there was no proposal of exploration during 2016-17. However, there was proposal for 12 nos. of intermediate core drilling to be given during the year 2017-18 with total meterage of 180m having av. depth of 15m. | No drilling work has been carried out as proposed during the year 2017-18 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. The mine was non-operative from 01.01.2018. | Nil |
| 1b | Exploration over lease area for geological axis 1 or 2 | As per approved document, valid for the plan period 2015-16 to 2019-20, there was no proposal of exploration during 2016-17. However, there was proposal for 12 nos. of intermediate core drilling to be given during the year 2017-18 with total meterage of 180m having av. depth of 15m, covering 6.0 Ha on the Southern part of lease area for G1 and G2 level. | Previously 31 nos. of DTH were given at a grid interval of 100m X 100m with total meterage of 408.6m having maximum and minimum depth of hole at 14.5m and 11.8m respectively. During 2017-18, no exploration has been carried out till date of inspection of the mine. | Nil |

| | | | | |
|----|---|---|--|-----|
| 1c | Exploration Agencies and Expenditure in lakh rupees during the year | No such proposal was there. | No information is available. | Nil |
| 1d | Balance area to be explored to bring Geological axis in 1 or 2 | About 6.0 Ha area on the Southern part of lease was proposed to be explored under G1 and G2 level. | The proposed exploration was not carried out due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. The mine was not in operation since 01.01.2018. | Nil |
| 1e | Balance reserve as on 01/04/20 | As per approved document, valid for the plan period 2015-16 to 2019-20, the Reserve/Resource position as on 01.04.2015 was as given below:- Proved Reserve(111): 1170645 MT; Probable Reserve(122): 2954846 MT; Pre-feasibility Mineral Resource(221) : 292021 MT; Pre-feasibility Mineral Resource(222) : 695014 MT. | Since there was no production reported from the mine during 2015-16 and 2016-17. the mine reported production of 65943 MT during July, 2017 to December, 2017. Hence , the Reserve/Resource position as on 01.04.2018 was as given below:- Proved Reserve(111): 1104702 MT; Probable Reserve(122): 2954846 MT. Pre-feasibility Mineral Resource(221): 292021 MT; Pre-feasibility Mineral Resource(222): 695014 MT. | Nil |

| | | | | |
|----|--|---|--|-----|
| 1f | General remarks of inspecting officers on geology, exploration etc | The Aluminium ore of the lease area was predominantly Gibbsite (Trihydrate). The Ore is overlain by Laterite and underlain by Lithomargic clay. Both the Laterite and Ore body have variable thickness. The laterite of the area is hard and was mixed with Morrum. There was proposal for 12 nos. of intermediate core drilling to be given during the year 2017-18 with total meterage of 180m having av. depth of 15m, covering 6.0 Ha on the Southern part of lease area for G1 and G2 level. | Bauxite deposit of the area is mostly associated with laterite, occurs as irregular and discontinuous lenses or tabular bodies within the laterite capping. The maximum thickness of Bauxite horizon encountered in the DTH was 9.4m followed by lithomargic clay. The proposed exploration of 12 coring boreholes could not be carried out by the lessee till the date of inspection of the mine due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC | Nil |
|----|--|---|--|-----|

Development :

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|--|--|---|-----|
| 2a | Location of development w.r.t.lease area | As per approved document, valid for the plan period 2015-16 to 2019-20, during the year under review, quarry no. 1 (at the extension of centralpart of lease), & quarry no. 2 (at the extension of southern part of lease) were proposed to be worked. | The mine was not working from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. Hence, the proposed development could not be taken up. | Nil |
| 2b | Separate benches in topsoil, overburden and minerals (Rule 15) | Separate benches in Top Soil, Overburden and Bauxite were proposed. In Soil, the bench height will vary according to the availability of top soil. Both in Overburden and Bauxite, the bench dimension was proposed to be 6m X 6m. | Separate benches in Top soil, Overburden and Bauxite were developed within stipulated dimension. The quarrywise bench dimension is given below:- Quarry no.1: OB-2 benches of 1.5-2m(Top soil) and Bauxite-1 bench of 1.5-3m; Quarry no. 2: OB-1 bench of 2.5-3m(Top soil & Laterite) and Bauxite-2 benches of 4.5-5m each; Quarry no. 3: OB-1 bench of 0.5m(Top soil) and Bauxite-1 bench of 1.5m(mixed with Laterite). | Nil |

| | | | | |
|----|--------------------------------------|---|--|-----|
| 2c | Stripping ratio or ore to OB ratio | As per approved document, valid for the plan period 2015-16 to 2019-20, the overall stripping ratio during the period under review was proposed to be 1: 0.5. During 2017-18, the stripping ratio was proposed 1:0.51. | During 2017-18 (From July to December, 2017) the Ore to OB ratio was not calculated due to OB removal figure was Nil. The production figure reported was 65943 MT and OB removal was Nil. | Nil |
| 2d | Quantity of topsoil generation in m3 | As per approved document, the top soil generation during 2015-16 to 2019-20 was proposed to be as under:- i. 2015-16: 22811 cu.m; ii. 2016-17: 26456 cu.m; iii. 2017-18: 30184 cu.m; iv. 2018-19: 29774 cu.m; and v. 2019-20: 20461 cu.m. | The mine was not working from 01.10.2018 due to imposition of penalty by the order H'onble High Court in context to production with EC. However, The top soil generation figure during July to December, 2017 was not recorded by the lessee as very meager quantity of top soil was generated during the period as the working was concentrated mostly in ore zone. | Nil |

| | | | | |
|----|---|---|--|---|
| 2e | Quantity of overburden generation in m3 | As per approved document, valid for the plan period 2015-16 to 2019-20, the Overburden generation during the period was proposed to be as under:- i. 2015-16: 45880 cu.m; ii. 2016-17: 61751 cu.m; iii. 2017-18: 70327 cu.m; iv. 2018-19: 82072 cu.m; and v. 2019-20: 57271 cu.m. | The quantity of OB generation during last five years is given below:- 2013-14: Nil; 2014-15: Nil; 2015-16: Nil; 2016-17: Nil; 2017-18: 4250 cu.m (July to December, 2017) | Nil |
| 2f | General remarks of inspecting officers on development of pit w.r.t. type of deposit etc | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal to develop Quarry no. 1 and 2, located on the Western and Southern portion of lease respectively. The deposit was of blanket type with predominantly Gibbsite (Trihydrate). | The lessee had previously developed three (03) quarries. Previously Southern part of Quarry no. 2 on the South of lease area, SW part of Quarry no. 1 on the Western part of lease area and Quarry no. 3 on the Northern part of lease area were developed. As per proposal the development work was in progress during 2017-18 in quarry no. 1 and 2. The deposit is predominantly Gibbsite (Al ₂ O ₃ . 3H ₂ O). | The mine not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

Exploitation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|---|--|---|---|
| 3a | Number of pit proposed for production | As per approved document, Quarry no. 1, 2 were proposed to work for production during 2015-16 to 2019-20. | During the year 2017-18, the mine was worked from 22.05.2017 to 31.12.2017. During the period both the quarries viz. quarry no. 1 and 2 were worked for production. Altogether 3 nos. of quarries have been developed in the lease area. The dimension of quarries are given below:- Q1: 230m X 70m X 6m; Q2: 120m X 80m X 12.5m; and Q3: 80m X 25m X 2m. | The mine was not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 3b | Quantity of ROM mineral production proposed | As per approved document, the approved year wise proposed production schedule was as given below:- i. 2015-16: 312485 MT; ii. 2016-17: 380691 MT; iii. 2017-18: 437757 MT; iv. 2018-19: 434676 MT; and v. 2019-20: 434381 MT. | The quantity of ROM mineral production during last five years is given below:- 2013-14: Nil; 2014-15: Nil; 2015-16: Nil; 2016-17: Nil; and 2017-18: 65943 MT (During July to December, 2017). | Nil |
| 3c | Recovery of saleable/usable mineral from ROM production | The proposed recovery of saleable/useable mineral from ROM production was 80% as per approved document, valid for the plan period 2015-16 to 2019-20. | The recovery of Mineral from ROM during the period 2017-18 (July to December, 2017) was around 60-65%. Further, the mine was not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. | Nil |

| | | | | |
|----|---|--|---|-----|
| 3d | Quantity of mineral reject generation | No proposal was available for mineral rejects generation during the approved plan period of 2015-16 to 2019-20. | No mineral reject generation was reported from the mine. | Nil |
| 3e | Grade of mineral rejects generation and threshold value declared. | Not applicable as there was no proposal of Mineral reject generation. Further, the threshold value for Bauxite has been fixed at 30% Al ₂ O ₃ & <5% SiO ₂ . | No Mineral Reject generation had been reported from the mine. Hence grade of mineral reject is irrelevant. The Threshold value of Bauxite is Al ₂ O ₃ - 30% with SiO ₂ - < 5%. As the av. grade of ore produced is >40% Al ₂ O ₃ (Upto 45% Al ₂ O ₃). | Nil |
| 3f | Quantity of sub grade mineral generation. | There was no proposal for Sub-grade mineral generation in the approved document, valid for the plan period 2015-16 to 2019-20. | No sub-grade Bauxite production has been reported so far from the mine. However, whatever sub-grade materials were generated from the mine were blended with high grade material before dispatch, maintaining the requisite grade. Thus mineral wastage was avoided and ascertaining mineral conservation aspect. | Nil |
| 3g | Grade of sub grade mineral generation | There was no proposal for Sub-grade mineral generation during the plan period 2015-16 to 2019-20, hence grade of the same is not applicable. | Not applicable as there was no sub-grade generation reported from the mine during 2017-18. | Nil |

- | | | | | |
|----|---|--|---|-----|
| 3h | Manual / Mechanised method adopted for segregating from ROM | In the approved document, manual method was proposed for segregating from ROM. Total ROM was proposed to be sorted out by hand picking at mine site. Only the large lumps of Bauxite of the lateritic contact zone was proposed to be broken into small pieces up to 10 cm in size to prevent Iron and Silica contamination of lateritic zone. | The Bauxite ore after blasting was segregated manually from ROM. The large lumps of Bauxite were broken into small pieces(10 cm size). As on date of inspection the mine was not in operation from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. | Nil |
| 3i | Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. | No analysis or beneficiation study was proposed for sub-grade mineral and reject material since no sub-grade and reject material was proposed to be generated from the mine as per approved document, dated 01.06.2016. | No analysis or beneficiation study was carried out for sub- grade mineral and reject material as no sub-grade mineral and reject material was reported to be generated from the mine. | Nil |

| | | | | |
|----|---|---|--|-----|
| 3j | Provision of drilling and blasting in mineral benches | As per approved document, valid for the plan period 2015-16 to 2019-20, there was provision of drilling and blasting in harder formation. | Drilling with DTH (100 mm dia) and blasting were done in the mine during 2017-18 (July to December, 2017). For OB, the Burden and Spacing were kept at 1m X 1m respectively and for Bauxite, the Burden and Spacing were kept at 3m X 3.5m respectively. For OB removal, the depth of hole was kept <3m and for Bauxite it was kept at 6.6m with 10% of SG drilling in both the cases. | Nil |
| 3k | Provision of mining machineries in mineral benches | The following machineries were proposed to be used in the mine as per approved document, valid for the plan period 2015-16 to 2019-20:- i. DTH drill: 04 nos.(100 mm dia); ii. Compressor: 04 no. (300 cu.m/Min); iii. Excavator: 05 nos. (0.9 cu.m); iv. Tipper: 02 no. (10MT); and v. Jackhammer: 04 nos. | During current year i.e 2017-18 (July to December, 2017), the following machineries were found to be used:- DTH drill: 01 no.(100 mm dia) (Atlas Copco); Compressor: 01 no. (300 cu.m/Min) (Atlas Copco XAH-236); Excavator: 03 nos. (0.9 cu.m) (L & T Komatsu); Dumper: 07 nos. (14 cu.m). | Nil |

| | | | | |
|----|--|--|--|--|
| 31 | Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM | It was proposed in the approved document, valid for the plan period 2015-16 to 2019-20, that the bench height in Top soil and OB will be restricted to 3.2m and bench height in Bauxite will be kept within 6m. The width of benche will be kept within 6m. The proposed bench dimension as per approved Mining Plan has been found to be suitable with the proposed method of mining under 'A'-FM category. | In actual practice the height of bench in Top soil and OB was kept between 1.5-3m in both the quarries and in Bauxite, the height was kept at 1.5-3m in Quarry no. 1 and 4.5-5m in Quarry no. 2. The width of the benches have been maintained below 6m in both the quarries. The height and width of benches are in conformity with the method of mining adopted under 'A'-FM category. | Nil |
| 3m | Total area covered under excavation/pits | As per approved document, there was proposal to excavate 14.66 Ha area during the approved plan period of 2015-16 to 2019-20. | It was reported that upto 2017-18 (upto December, 2017), a cumulative of about 2.55 Ha area was covered under excavation including 0.9 Ha of backfilled area. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

- 3n Ore to OB ratio for the pit/mine during the year. As per approved document, dated 01.06.2016, valid for the plan period 2015-16 to 2019-20, the overall Ore to OB ratio during the period under review was proposed to be 1: 0.5. During 2017-18 (From July to December, 2017) the Ore to OB ratio could not be calculated in absence of OB removal figure. The production reported was 65943 MT and OB removal was Nil. The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC.
- 3o Total area put in use under different heads at the end of year. As per approved document, dated 01.06.2016, valid for the plan period 2015-16 to 2019-20, the total area put to be used after completion of 5 years working i.e at the end of 2019-20, will be as follow :-
 i. Quarry- 17.18 Ha (Including 6.76 Ha of backfilling area);
 ii. Road- 0.96 Ha;
 iii. Plantation- 1.1 Ha;
 iv. Dump: 2.05 Ha.
 v. Total area put to be used upto 2019-20: 21.29 Ha; and
 vi. Total unused area: 29.576 Ha out of total lease area of 50.866 Ha. Upto 2017-18 (December, 2017) the total area put to use was as under:-
 Quarry- 2.55 Ha (including 1.5 Ha of backfilled area);
 Road- 0.96 Ha;
 O.B Dump: 0.88 Ha;
 Total area put to use: 4.39 Ha; and
 Total unused area: 46.476 Ha out of total lease area of 50.866 Ha. Nil

| | | | | |
|----|--|---|---|-----|
| 3p | Production of ROM mineral during the last five year period as applicable | The production as per approved plan period from 2015-16 to 2019-20, the proposed year wise production was as given below: i. 2015-16: 312485 MT; ii. 2016-17: 380691 MT; iii. 2017-18: 437757 MT; iv. 2018-19: 434676 MT; and v. 2019-20: 434381 MT. | The quantity of ROM mineral production during last five years is given below:- 2013-14: Nil; 2014-15: Nil; 2015-16: Nil; 2016-17: Nil; and 2017-18: 65943 MT (During July to December, 2017). | Nil |
| 3q | General remarks of inspecting officers on method of mining etc. | As per approved document, the mine was proposed to be operated by opencast method under 'A'-FM category with bench dimension of 6m X 6m both in in OB and Bauxite. | As per approved Modification of Mining Plan, 'A'-FM method of mining was adopted in the mine within stipulated bench dimension. In actual practice the height of bench in Top soil and OB was kept between 1.5-3m in both the quarries and in Bauxite, the height was kept at 1.5-3m in Quarry no. 1 and 4.5-5m in Quarry no. 2. The width of the benches have been maintained below 6m in both the quarries. | Nil |

Solid Waste Management - Dumping:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|---|---|--|---|
| 4a | <p>Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)</p> | <p>As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal for separate dumping for Top soil and OB material(Laterite). Concurrent backfilling and spreading of top soil was also proposed. Laterite was proposed to be stacked separately for its future use after approval of mining plan from concerned authority since it is a minor mineral. There was no proposal of dumping of Mineral Reject during the current plan period.</p> | <p>The proposed dumps could not be created as the mine working started on 22.05.2017. Presently three (03) old dump existed in the lease area of which one (01) was top soil dump measuring 35m X 30m X 7.5m located near Quarry no. 1, located along Western margin of Central part of lease and other two (02) were OB/Waste dumps measuring 45m X 50M x 7m (Waste) & 35m X 24m X 6m (Laterite) located near Quarry no. 2 on the Southern part of lease. There was no dump for Mineral Reject within the lease area.</p> | <p>The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC.</p> |
|----|---|---|--|---|

| | | | | |
|----|---|---|--|--|
| 4b | Location of topsoil, OB and mineral reject dumps | As per approved document, there was proposal for one Top soil dump, on the North of Quarry no. 2 and one Laterite dump, along the Eastern edge of Central part of lease, during the plan period 2015-16 to 2019-20. There was also no proposal for Mineral Reject dump. Simultaneous backfilling and spreading of top soil has also been proposed during the current plan period. The Top soil dump was proposed to be rehandled during 2016-17 & 2017-18. for reclamation. | The proposed Top soil and Laterite dumps could not be created. Three (03) nos. of old dump existed in the lease area of which one (01) was top soil dump and two (02) were OB/Waste dumps. The top soil dump was located on the North of quarry no. 1 near Western edge of Central part of lease area and other two OB dumps were located on the North of quarry no. 2 on the Southern part of lease area. | Nil |
| 4c | Number of dumps within lease area and outside of lease area | As per approved document, there was proposal of Top soil and Laterite dumps within the lease area. | The proposed dumps could not be created due to non-working status of the mine. However, three (03) nos. old dumps existed within the lease area of which one (01) was top soil dump and two (02) were OB/Waste dumps. There was no dump outside lease area. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

| | | | | |
|----|---|---|---|-----|
| 4d | Location of dumps w.r.t. ultimate pit limit (Rule 16) | As per approved document, valid for the plan period 2015-16 to 2019-20, the Top soil dump and Laterite dump were proposed to be created outside Ultimate Pit Limit (UPL) almost at the Central part of lease. | The existing dumps (03 nos.) were located within the Ultimate Pit Limit (UPL). The proposed dumps could not be created as the mine was not in operation due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. | Nil |
| 4e | Number of active and alive dumps. | There was proposal for creation of two (02) active dumps during the approved Plan period of 2015-16 to 2019-20. Out of two dumps, one was of top soil and the other was of Lateritel. Re-hanling of dump no.2 was proposed during the year 2017-18. | The proposed dumps (Top soil & Laterite) could not be created. All the three old existing dumps were found to be non active as on date of inspection. | Nil |
| 4f | Number of dead dumps. | There was no proposal of dead dump in the approved document, valid for the plan period 2015-16 to 2019-20. | Due to non working status of the mine, all the three (03) existing dumps become dead. | Nil |

| | | | | |
|----|------------------------------|---|---|-----|
| 4g | Number of dumps established. | There was no proposal of dump establishment during the approved plan period of 2015-16 to 2019-20. There was proposal for re-handling of three old existing dumps during 2015-16 and 2017-18 and one new top soil dump during 2016-17 which was proposed to be created during 2015-16. Old dump no. 1(Near Q2)& 3(Near Q1) were proposed to be re-handled during 2015-16 and old dump no. 2(Near Q2) was proposed to be rehandled during 2017-18. | No dump was established also no re-handling of dump could be done due to non-working status of the mine during 2015-16 and 2017-18. Since the new Top soil dump could not be created hence its re-handling is not relevant. | Nil |
|----|------------------------------|---|---|-----|

| | | | | |
|----|--|--|---|--|
| 4h | Whether Retaining wall or garland drain all along dumps are there. | There was proposal for construction of Retaining wall and Garland drain along the toe of the new Laterite dump, proposed to be created at the Central part of lease along the Eastern lease boundary during the period of 2015-16 to 2019-20 as per approved modification of Mining Plan dated 01.06.2016. | The laterite dump could not be created upto December, 2017. Thereafter, mine became non operative from 01.01.2018, hence Retaining wall and Garland drain were not constructed. Further, no Retaining wall or Garland drain was constructed all along the existing old dumps since they were proposed to be re-handled. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 4i | Length of Retaining wall or garland drain all along dumps | No specific proposal was there in the approved document, regarding length of Retaining wall or Garland drain. | Not applicable since the proposed laterite dump could not be created till the date of inspection of the mine. | Nil |
| 4j | Number of settling ponds | No such proposal was there for construction of settling pond in the document, valid for the plan period 2015-16 to 2019-20. | Not applicable. | Nil |

| | | | | |
|----|--|---|---|--|
| 4k | Specific comments of inspecting officer on waste dump management | As per approved document, there was proposal for one Top soil dump, on the North of Quarry no. 2 and one Laterite dump, along the Eastern edge of Central part of lease, during the plan period 2015-16 to 2019-20. There was also no proposal for Mineral Reject dump. Simultaneous backfilling and spreading of top soil has also been proposed during the current plan period. The old dump no. 2 was proposed to be rehandled during 2017-18 for reclamation. | One old Top soil dump and two OB/Waste dumps existed on the Central and Southern portion of the lease area. The dimension of dumps were as given below:- Top soil dump: 35m X 30m X 7.5m; OB/Waste Dump no. 1: 45m X 50m X 7m; and OB/Waste Dump no. 2: 35m X 24m X 6m. All three dumps were stabilized by natural phenomena in course of time due to non-working status of the mine. All three (03) dumps became non active. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
|----|--|---|---|--|

Solid Waste Management - Backfilling:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|---|--|--|---------|
| 5a | Status of part or full extraction of mineral from mined out area before starting backfilling. | As per approved document, there was proposal for simultaneous backfilling along with top soil spreading during the approved plan period of 2015-16 to 2019-20. | Simultaneous backfilling was in practice in the mine in quarry no. 2 on the Southern part of lease. It was reported that about 0.90 Ha area was backfilled till December, 2018 i.e before closure of the mine. | Nil |

| | | | | |
|----|---|--|--|--|
| 5b | Area under backfilling of mined out area | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal for backfilling of about 6.76 Ha void area out of total excavated area of 17.18 Ha within the lease upto the plan period 2019-20. | Upto December, 2017, about 0.90 Ha area was backfilled. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 5c | Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32) | As per approved document, there was proposal for stacking of top soil at the central part of the lease during 2015-16. There was also proposal of top soil spreading over backfilled area of Quarry no. 1 and 2 at the Central and Southern poart of lease respectively. | One old top soil dump was present along the Western edge of the central part of the lease located on the North of quarry no. 1. Concurrent top spreading was done in Quarry no. 2 on the Southern part of lease. | Nil |

| | | | | |
|----|--|--|---|-----|
| 5d | Total area fully reclaimed and rehabilitated | During the approved plan period of 2015-16 to 2019-20, there was proposal for backfilling of about 5.86 Ha area out of 14.66 Ha of excavated area. There was proposal for simultaneous spreading of top soil over backfilled area during the plan period. | It was reported that about 0.90 Ha area was backfilled and reclaimed. | Nil |
| 5e | General remarks of inspecting officers on backfilling and reclamation etc. | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal of backfilling and top soil spreading over about 5.86 Ha of void area within the lease during the plan period. No Rehabilitation was proposed during the plan period. | About 0.90 Ha area was backfilled and reclaimed. No rehabilitaion was done. As on date of inspection, it was reported that the mine was not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC., | Nil |

Progressive Mine Clousre Plan:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|--|--|--|--|
| 6a | Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2). | No such proposal was there in the approved document, valid for the plan period 2015-16 to 2019-20. | The Annual Report on PMCP under Rule- 26(2) of MCDR, 2017 was not submitted by the party for the period 2017-18, for which Violation letter was issued to the party vide this office letter no. BIH/LOH/BX/233/RRO, dated, 04.03.2018. | The mine was not working from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 6b | Area available for rehabilitation (ha) . | As per approved document, about 2750 nos. of plantation were proposed covering an area of 1.1 Ha along the NE lease boundary and over the backfilled area of Quarry no. 1 for rehabilitation during the plan period of 2015-16 to 2019-20. | It was reported that upto December, 2017, a cumulative of about 1.5 Ha area was backfilled. No area was rehabilitated. | Nil |
| 6c | afforestation done (ha). | As per approved document, 2750 nos. of plants were proposed to be planted covering an area of about 1.1 Ha during the plan period 2015-16 to 2019-20. | No data on afforestation was available. | Nil |

| | | | | |
|----|---|---|---|-----|
| 6d | No. of saplings planted during the year | As per approved document, 2750 nos. of saplings were to be planted during the plan period 2015-16 to 2019-20. During the year 2017-18, about 575 nos. of saplings were proposed to be planted. The year wise proposed plantation schedule is given below:- i. 2015-16: 375 nos.(0.15 Ha); ii. 2016-17: 375 nos.(0.15 Ha); iii. 2017-18: 575 nos.(0.23 Ha); iv. 2018-19: 650 nos.(0.56 Ha); and v. 2019-20: 775 nos. (0.31 Ha). Thus totalling 2750 nos. of plants over 1.1 Ha. | No afforestation figure was available. | Nil |
| 6e | Cumulative no .of plants | There was no proposal for cumulative plantation. However, during the plan period 2015-16 to 2019-20, about 2750 nos. of plantation were to be done. | No cumulative data on plantation was available. | Nil |

| | | | | |
|----|---|---|--|-----|
| 6f | Any other method of rehabilitation | No further proposal was available in the approved document, valid for the plan period 2015-16 to 2019-20. | Not applicable. | Nil |
| 6g | Cost incurred on watch and care during the year | No proposal was available in the approved document. | No information was available. | Nil |
| 6h | Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (L x B x D | As per approved document, about 5.86 Ha area was proposed to be backfilled and no proposal was available regarding dimension of the void area to be backfilled. | It was reported that a cumulative of about 1.5 Ha area was backfilled in Quarry no. 2 on the Southern part of lease. The approximate dimension of backfilled area was 150m X 100m. | Nil |
| 6i | Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings | There was proposal for 5.86 Ha of backfilling in the approved document, valid for the plan period 2015-16 to 2019-20, by using about 525632 cu.m of OB/Waste material followed by 129686 cu.m of top soil spreading over backfilled area. | It was reported that upto December, 2017 about 1.5 Ha area has been backfilled. | Nil |

| | | | | |
|----|---|---|--|---|
| 6j | Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal of afforestation over backfilled area during the plan period 2017-18 to 2019-20 over an area of 0.8 Ha in Quarry no. 1 on the Western part of lease. However, there was also proposal of afforestation along NE part of lease boundary during 2015-16 to 2016-17 covering an area of 0.3 Ha. | No data on plantation was available during the time of inspection. Quarry no. 1 could not be backfilled during 2017-18 due to no-working status of the mine. | The mine was not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 6k | Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir | There was no such proposal in the approved document. | No water reservoir has been constructed. | Nil |
| 6l | Compliance on reclamation and rehabilitation by backfilling (v)any other specific means. | There was no other proposal of reclamation and rehabilitation in the approved document | Not applicable. | Nil |
| 6m | Compliance of rehabilitation of waste land within lease (i)afforestation | There is no recorded Waste land within the lease area. | Not applicable. | Nil |

| | | | | |
|----|---|--|---|-----|
| 6n | Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha) | There was no such proposal as no waste land exists in the lease area. | Not applicable. | Nil |
| 6o | Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation | No proposal was available. | Not applicable. | Nil |
| 6p | Compliance of environmental monitoring (core zone and buffer zone) | No specific proposal was available. | During the period 2017-18, environmental monitoring was carried out for Ambient Air, Noise and Ground water. The result of which were available. | Nil |
| 6q | General remarks of inspecting officers on PMCP compliance and progressive closure operations etc. | It was proposed in the approved document that, out of 14.66 Ha of excavated area during the plan period 2015-16 to 2019-20, about 5.863 Ha area will be backfilled. Further, 1.1 Ha area was proposed to be covered under Green belt creation. | Not much effort could be made by the lessee to adhere with the proposal made in the last approved document along with PMCP valid for the plan period 2015-16 to 2019-20, in context to excavation schedule, production target, backfilling etc. Upto 2017-18 (upto December, 2017), a cumulative of about 2.55 Ha area was covered under excavation including 0.9 Ha of backfilled area. No green belt was created. | Nil |

Mineral Conservation:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|--|---|--|--|
| 7a | ROM Mineral dispatch or grade-wise sorting within lease area | There was no proposal for mineral dispatch. There was proposal for grade wise sorting within the lease. | Bauxite of this mine is pre-dominantly metal grade. The year wise dispatch figure is given below:- i. 2012-13: Nil; ii. 2013-14: Nil; iii. 2014-15: Nil; iv. 2015-16: Nil; v. 2016-17: Nil; and vi. 2017-18: 65943 MT (Grade: < 40-45% Al2O3). | The mine was not working from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

| | | | | |
|----|---|--|---|-----|
| 7b | Method of grade-wise mineral sorting i.e. manual or mechanical. | Manual sorting and blending to ensure the required grade was proposed in the approved document, valid for the plan period 2015-16 to 2019-20. | Manual grade wise sorting, manual screening(for fraction above 1" size) followed by blending with suitable grade was practiced at the mine site during the year 2017-18. Thus all possible efforts like hand sorting, hand screening, bulk sampling followed by time to time chemical analysis were systematically followed to ensure that ore is not being mixed with waste material. | Nil |
| 7c | Different grade of mineral sorted out at mines. | No specific proposal was there in the approved document. | Generally two types of ore stack were made within the mine site. One was of 40% Al ₂ O ₃ and above grade material and the other of below 40% Al ₂ O ₃ grade material. The low grade ore was blended with high grade material in appropriate calibrated proportion before dispatch to maintain the required grade to be dispatched to the consignee. | Nil |
| 7d | Any beneficiation process at mines . | No proposal of mineral beneficiation at mine site was made in the approved modification of Mining Plan dated 01.06.2016, valid for the plan period 2015-16 to 2019-20. | No mineral beneficiation was done, only manual sorting, screening and sizing were done at the mine site. The mine re-opened on 22.05.2017 and worked upto December, 2017. | Nil |

| | | | | |
|----|--|---|--|---|
| 7e | General remarks of inspecting officer on Mineral conservation and beneficiation issues | It was proposed in the approved modification of Mining Plan that, low grade Bauxite will be hand sorted and suitably blended to meet the metal grade requirement. Mechanical screening of the fraction above 1" size was also proposed. | No beneficiation was carried out at the mine site. For Mineral Conservation aspect, lessee had deployed suitable nos. of workers for grade wise sorting, blending etc to avoid mixing of ore with deleterious material. The year wise employment figure is given below:- 2012-13: Nil; 2013-14: Nil; 2014-15: Nil; 2015-16: Nil; 2016-17: Nil; and 2017-18: 40 nos. (upto December, 2017). | The mine was not worked from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
|----|--|---|--|---|

Environment:

| Sl.No. | Item | Propasals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|---|--|---|-----|
| 8a | Separate removal and utilization of topsoil (Rule 32) | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal for separate removal of top soil and stacking of the same on the North of Quarry no. 2 during 2015-16. Simultaneous backfilling and spreading of top soil has also been proposed during the current plan period. The Top soil dump was proposed to be rehandled during 2017-18 for reclamation. | During the plan period 2017-18, the mine was worked from 22.05.2017 to December, 2017. The top soil generated from the mine was a very merger amount and not recorded for that period. Hence, no new top soil dump was created as per proposal. | Nil |
|----|---|--|---|-----|

| | | | | |
|----|--------------------------------------|---|--|-----|
| 8b | Concurrent use or storage of topsoil | As per approved document, there was proposal for concurrent spreading of top soil over backfilled area from 2016-17 to 2019-20. During 2015-16 a new top soil dump was proposed to be created on North of Quarry no. 2, almost at the Central part of lease. The old top soil dump (Dump no. 3), located on the North of Quarry no. 1 was proposed to be re-handled during 2015-16. | The proposed top soil dump could not be created as the mining work was only concentrated to get production. The mine worked from may,2017 and production reported from July,2017 to December,2017. | Nil |
|----|--------------------------------------|---|--|-----|

| | | | | |
|----|--|--|--|-----|
| 8c | Separate dumps for overburden, waste rock, rejects and fines (Rule 33) | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal for separate dumping for Top soil and OB material(Laterite). Concurrent backfilling and spreading of top soil was also proposed. Laterite was proposed to be stacked separately for its future use after approval of mining plan from concerned authority since it is a minor mineral. There was no proposal of dumping of Mineral Reject and Fines during the current plan period. | Three (03) nos. of old dump existed in the lease area of which one (01) was top soil dump measuring 35m X 30m X 7.5m located near Quarry no. 1, located along Western margin of Central part of lease and other two (02) were OB/Waste dumps measuring 45m X 50M x 7m (Waste) & 35m X 24m X 6m (Laterite) located near Quarry no. 2 on the Southern part of lease. There was no dump for Mineral Reject within the lease area. | Nil |
|----|--|--|--|-----|

| | | | | |
|----|---|--|---|-----|
| 8d | Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use | There was proposal for 5.86 Ha of backfilling in the approved document, valid for the plan period 2015-16 to 2019-20, by using about 525632 cu.m of OB/Waste material followed by 129686 cu.m of top soil spreading over backfilled area. There was no proposal for creation of Reject/Fines dump during the plan period under review. | The quantity of OB/Waste material used for backfilling was not available. | Nil |
| 8e | Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc) | Phase wise restoration, reclamation and rehabilitation of land have not been proposed in the approved document | As per available record, about 1.5 Ha area was backfilled upto December, 2017. Phase wise restoration, reclamation and rehabilitation of land affected by mining operations were not available. | Nil |
| 8f | Baseline information on existence of plantation and additional plantation done (Rule 41) | No existing plantation was reported in the approved document. It was proposed that 2750 nos. of plantation shall be done over an area of 1.1 Ha along the NE lease boundary and in Quarry no. 1 area during 2015-16 to 2019-20. | The plantation figure was not available. | Nil |

| | | | | |
|----|--|---|---|--|
| 8g | Survival rate | No specific proposal was made in the approved document. | No information was available regarding plantation data. | Nil |
| 8h | Water sprinkling on roads to control airborne dust | There was no such proposal in the approved document, valid for the plan period 2015-16 to 2019-20. | The mine worked from May to December, 2017, no information about water sprinkling was available. | Nil |
| 8i | General remarks of inspecting officer on aesthetic beauty in and around mines area | As per approved document, valid for the plan period 2015-16 to 2019-20, there was proposal of 750 nos. of plantation along the NE part of lease boundary area during 2015-16 and 2016-17 covering 0.3 Ha area and 2000 nos. of plantation in backfilled area of Quarry no. 1 during 2017-18 to 2019-20 covering 0.8 Ha area to maintain the aesthetic beauty in and around the mine area. | The area was almost barren, devoid of thick vegetation. Only sparse vegetation was found within the lease area. There was very little amount of excavation within the lease area covering only 2.55 Ha out of total lease area of 50.866 Ha thus only about 5% area was covered under excavation. The general aesthetic beauty of the lease area was not disturbed as such. Along the Western edge of the lease area a steep scarp exists which is covered with thick vegetation. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

Compliance of Rule 45:

| Sl.No. | Item | Proposals | Actual work | Remarks |
|--------|------|-----------|-------------|---------|
|--------|------|-----------|-------------|---------|

| | | | | |
|----|---|--|---|-----|
| 9a | Status of submission of Monthly and Annual returns | The information furnished in Annual Return for the year 2017-18 covered Part-I of General information about mine and labour employment, Part-II about Employment & wages, Part-IIA about Capital Structure, Part-III consists of Consumption of materials, Part-IV about Consumption of explosives, Part-V consists of General Geology & Mining under various sections, Part-VI about Production, Dispatch & Stock and finally Part-VII consists of Cost of production | Party had submitted Nil Monthly returns regularly upto december,17, thereafter, the production reported from July, 2017 to December,2017 for the plan period 2017-18. The Annual return for the year 2017-18 has been submitted by the lessee but the same was referred back pointing out some discrepancies and revised annual return has not been submitted till date to this office, for which violation of Rule 45(5)(b) of MCDR,2017 was issued vide letter no. BIH/LOH/BXT/233/RRO, dated 04.03.2019. | Nil |
| 9b | Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager | In Part-I of the Annual Return for the year 2017-18, information regarding Full time Mining Engineer and Full time Geologist were to be submitted under item no. 8 & 9 since it is a 'A'-FM category mine. | S/Shri Gangadhar Tiwary as Mining Engineer cum Mine Manager and Raja Singh as Geologist have furnished in the submitted Annual return for the year 2017-18. | Nil |

| | | | | |
|----|---|--|--|--|
| 9c | Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc. | The land use pattern given in the Annual Return for the year 2017-18 was as under:- i. i) Already exploited & abandoned by opencast (O/C) mining -2.87 ha ii). Covered under current (O/C) Workings-2.45 ha. iii) Reclaimed/Rehabilitated - 2.70 ha iv) Ownership/exploring Agency of the mine: (Public Sector/Private sector/Joint Sector) -2.20 ha | Upto January, 2018 the total area put to use was as under:- i. Quarry- 2.55 Ha (including 1.5 Ha of backfilled area); ii. Road- 0.96 Ha; iii. O.B Dump: 0.88 Ha; iv. Total area put to use: 4.39 Ha; and v. Total unused area: 46.476 Ha out of total lease area of 50. 866 Ha. | Nil |
| 9d | Scrutiny of Annual return on afforestation | nos In Part-V, item no. 4.4 of the Annual Return for the year 2017-18, the plantation made was given as 500 nos with a survival rate of 60%. | As the mine was not in operation till 21.05.2017. The mine worked from 22.05.2017 and production reported from July, 2017 to December, 2017. plantation figure was not reported. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 9e | Scrutiny of Annual return on mineral reject generation (Grade and quantity) | In Part-V, Sec 4 of the Annual Return 2017-18, the information on Mineral Reject generation was Nil. | No Mineral Reject generation from the mine was reported during 2017-18 till the date of inspection of the mine. | Nil |

| | | | | |
|----|---|--|--|--|
| 9f | Scrutiny of Annual return on ROM stock and/or graded ore | In Part VI, item no. 1 & 2(A), of the Annual Return (2017-18), the ROM stock (opening balance) and Closing stock were shown as below:- i. Opening stock- <40% Al2O3: Nil; 40-45% Al2O3: 1160.29 MT; ii. Closing Stock- <40% Al2O3: Nil; 40-45% Al2O3: 817.07 MT. | The figure given for Opening stock and Closing stock as per Annual Return submitted for the year 2017-18. The Opening and Closing stocks were as given below:- i. Opening stock: <40% Al2O3: 1160.29 MT; and ii. Closing stock: <40% Al2O3: 817.07 MT. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |
| 9g | Scrutiny of Annual return on sale value, Ex. Mine price and production cost | The sale value, ex-mine price and production cost were shown Part-VI and VII of the Annual Return for the year 2017-18 as Rs 492/- per tonne. | In Part-VI, item no. 2(A) & (B) of the Annual Returns 2017-18, the Ex-Mine price is furnished as Rs 492/- per tonne, Sale value shown as Rs 492/- per tonne and cost of production as Rs 445/- per tonne, | Nil |
| 9h | Scrutiny of Annual return on fixed assets | The value of Fixed Assets of the lessee was given in Part-IIA of the A.R for the year 2017-18. | The value of Fixed Assets of the lessee for the year 2017-18 was shown as Rs. 1028815 /- in Part-IIA of the A.R, under Capital structure. | Nil |
| 9k | Scrutiny of Annual return on mining machineries | In Part-V, Sec 5/6/8/9 of the Annual Return 2017-18, under Machinery used, two (02) Trucks of 9.2 MT was mentioned. | During 2017-18, the mining machinery was in use are as given in the annual return for the year 2017-18: i) BACK HOE - 03, WHEEL LOADER - 01, ROCK DRILL (NON-ELEC.) -01, WATER TANKER -01 and OTHER HEM MACHINERY -01. | The mine was non-operative from 01.01.2018 due to imposition of penalty by the order of Hon'ble Supreme Court in context to production without EC. |

Details of violations observed during current inspection and compliance position of violation pointed out

| Violation observed | | | Show cause position | | |
|--------------------|---------------|---------------|---------------------|-----------|---------------|
| Rule NO. | Issued on | Compliance on | Rule NO. | Issued on | Compliance on |
| MCDR17 | Rule 26(2) | 04/03/2019 | | | |
| | Rule 45(5)(b) | 04/03/2019 | | | |

Date :

(SAGAR BODRA)

Indian Bureau of Mines