INDIAN BUREAU OF MINES MINERALS DEVELOPMENT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Ranchi regional office

Mine file No : BIH/GUM/BX/216/RRO Mine code: 07BHR32014

(i)Name of the Inspecting : C001) N.K.CHATERJI

Officer and ID No.

(ii) Designation : Assistant Mining Geologis

(iii) Accompaning mine : SRI G.D.TEWARI, MINES MANAGER.

Official with Designation

(iv) Date of Inspection : 08/02/2017 Prev.inspection date : 26/07/2016 (v)

PART-I : GENERAL INFORMATION

(a) Mine Name : NEW AMPTIPANI (49.27)

(b) Registration NO. : IBM/5041/2011

(C) Category : A Fully Mechanised

(d) Type of Working Opencast

Postal address (e)

> State : JHARKHAND District GUMLA Village AMPTIPANI Taluka BISHUNPUR Post office JOBHIPAT

Pin Code

FAX No. : N.A. E-mail : N.A.

Phone : 06565-226016

(f) Police Station : BISHUNPUR First opening date : 15/07/1985 (g)

Weekly day of rest (h) : THU

Address for : VILL-KARKAPAT correspondance

BISHUNPUR

DIST-GUMLA

: BHR0252 3. (a) Lease Number (b) Lease area : 49.07

Period of lease : 20 (C)

: 26/05/2005 (d) Date of Expiry

4. Mineral worked Main : BAUXITE

5. Name and Address of the

Lessee : AWADHESH KUMAR SINGH

AT -CHANDWA LATEHAR

JHARKHAND

Phone: 06565226016 & 9431390666

FAX :

Owner : AWADHES KUMAR SINGH

AT/PO-CHIRKUNDA DIST-DHANBAD JHARKHAND DHANBAD

JHARKHAND

Phone: 06552-23005,220

FAX :

Mining Engineer

Name : SRI G.D.TEWARY, Full Time

Qualification : B.Tech (Min)

Appointment/ : Termination date

Geologist

Name : ARBIND RANJAN, Full Time Qualification : M. Sc. (Applied Geolgy)

Appointment/:
Termination date

Manager

Name : SRI GANGADHAR TEWARY

Qualification : B.Tech (Min)

Appointment/:
Termination date

6. Date of approval of Mining : Existing rule 11 MCDR1988 31/01/1997
Plan/Scheme of Mining Mining Scheme rule 12 MCDR1988 22/03/2013
Renewal under rule 24 MCR1960 22/03/2013

MP review under 17(1) MCR 2016 12/09/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	As per last approved Scheme of Mining, dated 22.03.2013, valid for the plan period 2011-12 to 2014-15, there was proposal for 07 nos. of boreholes to be given during the year 2013-14 at a grid interval of 10mm X 100m.	No exploration was carried out during the year 2013-14 as the mine was not in operation during 2013-14. Backlog of 07 boreholes still existsted. The mine was not in operation during July, 2012 to April, 2014. The mine re-opened on 01.05.2014.	was approved on 12.09.2016, valid for the plan period 2015-16 to 2019-20 (2015-16 was lapse period).
1b	Exploration over lease area for geological axis 1 or 2	As per approvewd Mining Plan, dated 12.09.2016, valid for the plan period 2016-17 to 201920 (2015-16 was lapse period), there was proposal for 09 nos. of boreholes to be given during the year 2017-18 to cover approximately 9.0 Ha on the Southern and Eastern part of lease area for G1 and G2 level.	Previously in the year 2011, thirteen (13) nos. of DTH were given, at a grid interval of 100m X 100m, covering about 13 Ha area, with total metrage of 132.8 m having maximum and minimum depth of hole at 10.5 m and 10.0 m respectively. During 2013-14, no exploration was carried out as per proposal given in the last approved Scheme of Mining, since the mine was not in operation during 2013-14. The proposed exploration as per approved Mining Plan dated 12.09.2016 is due for 2017-18.	The mine was not in operation during July, 2012 to April, 2014 due to EC.

1c Exploration
Agencies and
Expenditure in
lakh rupees
during the year

No specific proposal was there in the approved Mining Plan valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period).

Lessee had explored the area earlier by hiring drilling rig. About Rs. 100000/- (One lakh only) was incurred tpwards drilling of total 132.8m in 13 nos. of boteholes within the lease area at the rate of about Rs. 755/- per meter of drilling.

1d Balance area to
 be explored to
 bring Geological
 axis in 1 or 2

About 9.0 Ha area on the Southern and Eastern part of lease area was proposed to be explored during the year 2017-18 under G1 and G2 level.

The proposed exploration -- is due for 2017-18.

1e Balance reserve as on 01/04/20

As per approved Mining Plan, valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period) the Reserve/ Resource as on 01.04.2016 was as given below:-Reserve(111): 507939 MT; ii. Probabale(122): 993571 MT; iii. Resource(211+ 222): 317435 MT.

The Reserve/Resource position as on 01.04.2016 was as given below:i. Reserve(111): 507939 MT (Av. Al203- 46.725%, SiO2- 4.08%);
ii. Probabale(122): 993571 MT (Av. Al2O3-46.725%, SiO2- 4.08%);
iii. Resource(211+222): 317435 MT (Av. Al2O3-46.725%, SiO2- 4.08%).

After depleting Nil production, during the period 2016-17, the Reserve/Resource position as on 01.04.2017 will be same as given above:i. Reserve(111): 507939 MT (Av. Al203-46.725%, SiO2- 4.08%); ii. Probabale(122): 993571 MT (Av. Al203-46.725%, SiO2- 4.08%); iii. Resource(211+222): 317435 MT (Av. Al203-46.725%, SiO2- 4.08%).

1f General remarks
 of inspecting
 officers on
 geology,
 exploration etc

The Aluminium ore of the lease area predominantly Gibbsitic(Tri hydrate). The Ore is overlain by Laterite and underlain by Lithomargic clay. Av. thickness of Laterite was 1.4m and Aluminium Ore varies in thickness from 3-5.8m and the av. thickness of Lithomargic Clay was 2.5m. There was proposal exploration through 09 BHs during the plan period of

2017-18.

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 around 6.0 m followed by lithomargic clay. The area was explored through 13 DTH given during the year 2011 covering about 6 Ha area.

The mine was not in operation during July, 2012 to April, 2014 due to EC. The mine re-opened on 01.05.2014, again the working of the mine was discontinued since March 2016 for extension of lease. The mine started operation from May, 2017.

Development :

Sl.No. Item Propasals Actual work Remarks

Location of 2a development w.r.t.lease area Mining Plan

As per approved dated 12.09.2016, valid for the plan period 2016-17 to 16 was lapse period), development was proposed in Quarry no. 2 and 4 (Merged) (on lease area). During the plan period area was proposed to be developed. Upto the plan period of 2016-17 to 2019-20, about 15.026 Ha area was proposed to be excavated.

As per proposal, the development work was in progress around Quarry no. 2 and 4(Merged) on the Western & SW part of the lease area upto the period of its operation, i.e upto February, 2016. 2019-20 (2015- The present working quarry (2& 4 merged) had crossed the proposed development limit of 2016-17 (as per Development Plan of approved Mining Plan). The same was pointed out the SW part of to the lessee through Violation letter issued vide this office letter no. BIH/GUM/BX/216/RRO, about 4.491Ha dated 29.05.2017.

The mine was not in operation during July, 2012 to April, 2014. The mine re-opened on 01.05.2014 and worked upto February, 2016. The mine again became nonoperative from March, 2016 to April, 2017 for extension of lease.

Separate benches Separate in topsoil, overburden and minerals (Rule 15)

2b

Soil, Overburden um) and Bauxite were proposed. In Top soil, OB height was proposed to be 3.5m. kept between 1-1.5m, 2.5-2.6m and 5.9respectively. The bench width was proposed to be kept within 6m in all 3 horizons.

Separate benches in benches in Top Overburden (maily consisting of top soil) and Ore were developed. (Laterite/Morr In OB (consisting of Top soil), the bench height varied from 1.5-4m and Bauxite bench was of 2-2.5m thickness. The and Ore, bench bench width was maitained between 32c Stripping ratio or ore to OB ratio

As per approved Mining Plan, the overall stripping ratio during the period 2016-17 to 16 was lapse period) was proposed to be 1: 0.64 Tes/cu.m. During 2016-17, the Ore to OB ratio was proposed to be 1: 0.52 Tes/cu.m.

MT).

During the period 2016-17, the mine was not in operation. During 2015-16, the average Ore to OB ratio was calculated as 1: 0.69 Tes/cu.m. During 2015-16, the production was $49741 \ \mathrm{MT}$ 2019-20 (2015- and total OB generation was 34818.5 cu.m (~69637

2d Quantity of topsoil generation in m3 Mining Plan,

approved the top soil generation during 2016-17 to 2019-20 (2015-16 was lapse period) was proposed to be as under:i. 2016-17: 18009 cu.m; ii. 2017-18: 25278 cu.m; iii. 2018-19: 27809 cu.m; and iv. 2019-20: 30927 cu.m.

As per

The Top soil generation figure was not available.

2e Quantity of As per The quantity of OB overburden approved generation during last generation in m3 Mining Plan, few years was as given below:the OB i. 2010-11: N.A; generation during 2016-17 ii. 2011-12: 3000 MT (~ to 2019-20 1500 Cu.m); (2015-16 was iii. 2012-13: 1000 MT (~ 500 Cu.m); lapse period) was proposed iv. 2013-14: Nil; to be as v. 2014-15: 56000 MT (~ under:-28000 Cu.m); and i. 2016-17: vi. 2015-16: 69637 MT (~ 36226 cu.m; 34819 Cu.m). ii. 2017-18: 54945 cu.m; iii. 2018-19: 65751 cu.m; and iv. 2019-20: 67803 cu.m. 2f General remarks The lessee had The mine was not As per of inspecting approved previously developed in operation officers on five (05) quarraries during July, 2012 Mining Plan development of dated within the lease area. to April, 2014 due pit w.r.t. type 12.09.2016, As per proposal, the to EC. The mine valid for the development work was re-opened on of deposit etc carried out in Ouarry 01.05.2014 and plan period 2016-17 to no. 2 & 4(Merged) on the worked upto 2019-20 (2015- Western and SW part of February, 2016. 16 was lapse the lease area upto the The mine again period), there period of its operation, became nonwas proposal i.e upto February, 2016. operative from to develop On the date of March, 2016 to inspection the mine was Quarry no. 2 April, 2017 for and 4(Merged), not in operation. extension of located on the The Bauxite of the area lease. Western and SW was mixed type with portion of predominantly Gibbsitic lease. The (Al203.3H20) in the deposit was of range of 70-75% and blanket type balance 30-25% is Bohemitic (Al2O3. H2O). with predominantly

Exploitation:

Sl.No. Item Propasals Actual work Remarks

Gibbsitic (Trihydrate).

3a Number of pit proposed for production

As per approved Mining Plan dated , dated 12.09.2016, valid for the plan period 2016-17 to 16 was lapse period), proposed from 60m X 6m; 4 (Merged) as envisaged in Development Plan of the approved document.

Production was reported mainly from Ouarry no. 2 and 4(Merged) on the Western & SW part of the lease area upto the period of its operation, i.e upto February, 2016. Altogether, 5 quarries 2019-20 (2015- were opened in the area, the dimension of which are given below:production was i. Quarry no. 1: 160m X Ouarry no. 2 & ii. Ouarry no. 2 & 4(Merged): 600m X 180m X 6.5m; iii. Quarry no. 3: 70m X 35m X 6m;

The mine was not in operation during July, 2012 to April, 2014 due to EC. The mine re-opened on 01.05.2014 and worked upto February, 2016. The mine again became nonoperative from March, 2016 to April, 2017 for extension of lease.

3b Quantity of ROM mineral production proposed

As per approved Mining Plan, the ROM Mineral production to 2019-20 (2015-16 was lapse period) was proposed to be as under:i. 2016-17: 91330 Cu.m; ii. 2017-18: 99583 Cu.m; iii. 2018-19: 107120 cu.m; and iv. 2019-20: 113351 cu.m.

The quantity of mineral production during last seven years was as given below:-

iv. Quarry no. 5: 70m X

50m X 3m.

i. 2010-11: 10070 MT; ii. 2011-12: 15280 MT; during 2016-17 iii. 2012-13: 4090 MT; iv. 2013-14: Nil; v. 2014-15: 22910 MT; vi. 2015-16: 49741 MT; and

vii. 2016-17: Nil.

The mine was not in operation during 2016-17.

3с Recovery of sailable/usable production

The proposed recovery of le mineral from ROM production was 80%.

During the period 2015-16, the average recovery mineral from ROM saleable/useab of mineral from ROM was around 65-70%.

3d Ouantity of As per No mineral reject mineral reject generation was reported approved generation Mining Plan from the mine. dated 12.09.2016, no proposal was available for mineral rejects generation during the period 2016-17 to 2019-20 (2015-16 was lapse period). 3e Grade of mineral Not applicable No Mineral Reject rejects as there was generation had been no proposal of reported from the mine generation and threshold value Mineral reject hence grade of mineral declared. generation. reject is irrelevant. Further, the The Threshold value of threshold Bauxite is Al2O3- 30% value for with SiO2- < 5%. The av. Bauxite has grade of ore produced was of 40-46% Al203 and been fixed at 30% Al2O3 & 4-4.5% SiO2. <5% SiO2. 3f Quantity of sub There was no No sub-grade Bauxite grade mineral proposal for production was reported generation. Sub-grade from the mine. However, mineral whatever low grade generation in materials were generated the last from the mine were approved blended with high grade material before Mining Plan valid for the dispatch, maintaining plan period the requisite grade. 2016-17 to Thus mineral wastage was 2019-20. avoided and ascertaining Further, the mineral conservation period 2015-16 aspect. was was lapse period. 3q Grade of sub There was no Not applicable as there grade mineral proposal for was no sub-grade generation Sub-grade generation reported from mineral the mine during 2015-16. generation during the plan period 2015-16 to 2019-20, hence

grade of the same is not applicable.

3h Manual / Mechanised method adopted for segregating from ROM

In the approved Mining Plan, manual method was proposed segregating from ROM. Total ROM was hand picking lumps of Bauxite of the extension of lease. lateritic contact zone was proposed to be broken manually into small pieces up to 10 cm in size to prevent Iron and Silica contamination of lateritic

The Aluminium ore after blasting was segregated manually from ROM. The large lumps of Ore were broken into small pieces (10 cm size). The mine was not in operation during July, 2012 to April, 2014 due to EC. proposed to be The mine re-opened on sorted out by 01.05.2014 and worked upto February, 2016. The at mine site. mine again became non-Only the large operative from March, 2016 to April, 2017 for

3i Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.

study was proposed for sub-grade mineral and reject no sub-grade and reject material was proposed to be generated from the mine as per approved Mining Plan valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period).

zone.

No analysis or No analysis or beneficiation beneficiation study was carried out for subgrade mineral and reject material as no sub-grade mineral and reject material was reported to material since be generated from the mine.

3 ј Provision of drilling and blasting in mineral benches As per approved Mining Plan, valid for the plan period 2016-17 to 16 was lapse was provision of drilling and blasting in harder formation.

Drilling with DTH (100 mm dia) and blasting were done in the mine during the period 2015-16. For OB, the Burden and Spacing were kept at 2019-20 (2015- 1m X 1.5m respectively and for Ore, the Burden period), there and Spacing were kept at 3m X 3.5m respectively. For OB removal, the depth of hole was kept <3m (2.75m) and for Ore, it was kept at 6.6m with 10% of SG drilling in both the cases.

3k Provision of mining machineries in mineral benches The following machineries were proposed to be used in the mine as per approved Mining Plan:i. DTH drill: dia); ii.

Jackhammer: 04 nos. (34-39 mm)dia); iii.

Compressor: 03

no. (300 cfm); iv. Excavatoe: 03 nos. (0.9 cu.m);

v. Tipper: 04 no. (10MT).

The mine was not in operation during 2016-17.

The machineries proposed except Jackhammer were in use at the mine during 2015-16. For blasting, DTH machine was used for making holes. On the date of inspection, no machinery 03 nos.(100 mm was in use, as the mine

was not in operation.

31 Whether height It was of benches in proposed in overburden and the approved mineral suitable Mining Plan for method of valid for the mining proposed period 2016 in MP/SOM to 2019-20

It was proposed in the approved valid for the to 2019-20 (2015-16 waw height and width in Top soil, OB and Ore will be restricted within 6.0 m. 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.

It was During 2015-16, the proposed in mine was in operation under 'A'-OTFM category. Mining Plan In actual practice the valid for the height and width of period 2016-17 benches in Top soil, OB to 2019-20 and Ore were kept within (2015-16 waw 4-4.5 m in all the lapse period), quarries. The height and that the bench width of benches were in height and conformity with the width in Top method of mining adopted soil, OB and under 'A'-OTFM category.

The mine was not in operation during 2016-17 due to extension nof lease.

3m Total area
 covered under
 excavation/pits

As per approved Mining Plan, dated 12.09.2016, valid for the plan period 2016-17 to 2019-20 (2015- area. 16 was lapse period), there was proposal to excavate about 9.49 Ha area during the plan period under review. During 2016-17, it was proposed to excavate about 1.57 Ha area.

As on date of inspection (upto 2015-16), a cumulative of about 7.792 Ha area (NF area-7.778 Ha + F area-0.014 Ha) was covered under excavation including 0.84 Ha of backfilled area.

During 2016-17, the mine was not in operation. Ore to OB ratio for the pit/mine approved during the year. Mining Plan,

As per the overall stripping ratio during the period 2016-17 to 16 was lapse period) was proposed to be 1: 0.64 Tes/cu.m. During 2016-17, the Ore to OB ratio was proposed to be 1: 0.52 Tes/cu.m.

During the period 2016-17, the mine was not in operation. During 2015-16, the average Ore to OB ratio was calculated as 1: 0.69 Tes/cu.m. During 2015-16, the production was 49741 MT 2019-20 (2015- and total OB generation was 34818.5 cu.m (~69637 MT).

30 Total area put in use under different heads at the end of year

As per approved Mining Plan, valid for the under:plan period 2016-17 to 2019-20 (2015- Forest land); 16 was lapse period), the to be used after completion of Forest land); 5 years working i.e at (~0.91 Ha); the end of 2019-20, was as follow :i. Quarry-15.026 Ha (Including 6.08 Ha of backfilling area); ii. Road-1.048 Ha; iii. Green belt- 0.50 Ha; iv. OB Dump: 0.136 Ha; v. Infrastructure (Office): 0.005; vi. Total area put to be used: 16.715 Ha; and Total unused area: 32.354 Ha out of total lease area of 49.069 Ha.

Upto 2015-16, the total area put to use as per available record, was as i. Quarry- 7.792 Ha (including 0.014 Ha in ii. Backfilled area: 0.84 Ha total area put iii. Infrastructure & Road- 1.102 Ha (including 0.120 Ha in iv. O.B Dump: 0.906 Ha v. Green belt: 0.10 Ha; vi. Total area put to use: 9.9 Ha; and Total unused area: 39.169 Ha out of total lease area of 49.069 Ha.

3p Production of As per
ROM mineral approved
during the last Mining Plan,
five year period the proposed
as applicable production

As per approved Mining Plan, production during the year 2016-17, was 219191 the plan period 2015-16 and to 2019-20, the proposed year wise production schedule was as given below: i. 2015-16: 49741 MT (Actual); ii. 2016-17: 219191 MT; iii. 2017-18: 238998 MT; iv. 2018-19: 257089 MT; v. 2019-20: 272042 MT.

As per The quantity of mineral approved production during last Mining Plan, seven years was as given the proposed below:production i. 2010-11: 10070 MT;
during the ii. 2011-12: 15280 MT;
year 201617,was 219191 iv. 2013-14: Nil;
MT and during v. 2014-15: 22910 MT;
the plan vi. 2015-16: 49741 MT;
period 2015-16 and to 2019-20, the proposed year wise

The mine was not in operation during 2016-17.

3 a General remarks of inspecting officers on method of mining mine was

As per approved document, the operated by opencast method under 'A'-FM category with bench dimension of 6m X 6m both in OB and Ore. In every year 3 benches were proposed to be developed, first two benches were proposed to be developed in OB, consisting of Top soil and Morrum/Laterit e and the

third bench was proposed

developed in

to be

Ore.

During 2015-16, the mine was in operation by opencast method under 'A'-OTFM category. The proposed to be bench dimensions were maitained within stipulated limit. mine was not in operation during 2016-17 due to extension of lease. During 2015-16, the mine worked in Quarry no. 2 and 4.

Solid Waste Management - Dumping:

Sl.No. Item Propasals Actual work Remarks 4a Separate dumping As per of topsoil, OB and mineral rejects (Rule 32,33)

approved Mining Plan dated 12.09.2016, plan period 2016-17 to period), there lease area. was no proposal for dumping of Top soil and OB material within the lease area. There was no proposal for Mineral Reject dump either. Concurrent backfilling with simultaneos spreading of top soil was proposed during the plan period. Further, there was proposal of rehandling of 4 dumps, viz. D2(East of Q2&4), D1B(South of 02&04), D1A((South of Q2& Q4) and D3(Northern Part).

Separate dumps of Top soil and OB/Waste existed in the lease area. Total 7 nos. of dumps existed within the valid for the lease area. No fresh dump was created during 2015-16 and 2016-17. 2019-20 (2015- There was no Mineral 16 was lapse Reject dump within the

The mine was not in operation during 2016-17.

4b Location of topsoil, OB and mineral reject dumps

As per approved Mining Plan, valid for the plan period 2015-16 to 16 was lapse was no proposal for fresh dumping of Top soil OB/waste within the lease area as concurrent backfilling and spreading of top soil were proposed from the year 2016-17.

Total 6 nos. of dumps existed within the lease area. Dump no. D1A and D1B of Top soil, were located on the SW lease boundary, dump no. 2019-20 (2015- D2(OB) was located on the SW part of lease period), there area (on the West of Q4), dump no. D3(Top Soil) was located on the North of Q2, dump no. D4A & D4B(OB) were located East of O1 on the SE part of lease and one Morrum dump was created on the Western part of lease. No fresh dump was created during 2015-16 and 2016-17. There was no Mineral Reject dump within the

Number of dumps 4c within lease area and outside dump within of lease area

There was no proposal of as concurrent backfilling and top soil proposed in the approved Mining Plan, valid for the plan period 2015-16 to 16 was lapse period). There 3m; was no proposal of dump outside lease area.

lease area. Seven dumps were located within the lease area. The type and dimension the lease area of dumps are given below:i. Dump no. D1A (Top Soil): 45m X 35m X 6m; spreading were ii. Dump no. D1B (Top Soil): 32m X 20m X 4m; iii. Dump no. D2 (OB/Waste): 60m X 42m X 3m; iv. Dump no. D3 (Top soil): 65m X 25m X 7m; 2019-20 (2015- v. Dump no. D4A (OB/Waste): 30m X 18m X vi. Dump no. D4B (OB/Waste): 60m X 30m X 2m; and vii. Morrum dump (Western part of lease): 30m X 12m X 5m. There was no dump

outside lease area.

There were 3 nos. each of Top soil and OB/Waste dumps and 1 no. of Morrum dump within the lease area.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No fresh dump was proposed during the approved plan period of 2015-16 to 2019-20 (2015-16 was lapse period).	All the dumps were located outside the Ultimate Pit Limit (UPL). Two dumps were created on the Western part of lease without any approved proposal, which was communicated to the lessee in the form of Violation letter vide this office letter no. BIH/GUM/BX/216/RRO, dated 29.05.2017.	
4e	Number of active and alive dumps.		Out of seven dumps, 4 dumps were active within the lease area as concurrent backfilling was also under way. Total area covered under active dump was 0.509 Ha(~0.51 Ha).	The mine was not in operation during 2016-17 due to extension of lease.
4f	Number of dead dumps.	There was no proposal of dead dump in the approved Mining Plan dated 12.09.2016.	There were three (03) nos. of dead dumps present within the lease area, the area covered under dead dump was 0.396 Ha (~0.4 Ha).	
4g	Number of dumps established.	There was no proposal of dump establishment. There was proposal of re-handling of 4 dumps as per schedule given below:- i. 2016-17: Dump no. D2(OB); ii. 2018-19: Dump no. D1A & D1B(Top soil); and iii. 2019-20: Dump no. D3(Top soil).	mine was not in operation during 2016-17 due to extension of lease.	
4h	Whether Retaining wall or garland drain all along dumps are there.	There was no proposal of construction of Retaining wall or Garland drain	Retaining wall was constructed along two (02) existing dumps. No Garland drain was constructed along the dumps.	

around the dump.

4i Not applicable The length of retaining Length of wall were 60m and 40m Retaining wall as there was or garland drain no proposal of along dump no. D1A(Top all along dumps construction soil) and D2(OB) of Retaining respectively. wall and Garland drain in the approved Mining Plan. 4ј Number of No such No settling pond was created within the settling ponds proposal was there for lease. construction of settling pond in the approved Mining Plan. 4k Specific Simultaneous Seven dumps existed Two dumps were backfilling comments of within the lease area. created on the inspecting and top soil The type and dimension Western part of officer on waste spreading were of dumps are given at lease without any para 4(c). Retaining dump management proposed, no approved proposal, which was such proposal wall was given along two was there on dumps (D1A and D2) to communicated to waste dump stabilise the same. The the lessee in the management in dump on the Northern form of Violation part of the lease (D3) letter vide this the approved Mining Plan was terraced for its office letter no. BIH/GUM/BX/216/RRO valid for the stabilization. Rest , dated dumps were of moderate plan period 2015-16 to height and were within 29.05.2017. 2019-20 (2015- manageable limit. 16 was lapse period). Four (04) dumps viz. D2(OB), D1A & D1B(Top Soil) and D3(Top soil) were proposed to be rehandled during 2016-17, 2018-19 and 2019-20 for backfilling and reclamation of the voids.

Solid Waste Management - Backfilling:

Sl.No.	Item	Propasals	Actual work	Remarks
SI.NO.	TCEIII	Plopasals	ACCUAL WOLK	Kellial KS

5a Status of part or full extraction of mineral from mined out area before starting backfilling.

As per approved Mining Plan, there was proposal for part extraction of mineral from before starting backfilling simultaneous backfilling along with top soil spreading were proposed in the approved document valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period).

Simultaneous backfilling was in practice in the mine on Northern part of lease area, South of quarry no. 3 and on the East of quarry no. 4, at the Central part of lease area. About 0.84 mined out area Ha area was backfilled and reclaimed upto February 2016. The mine was not in operation from March, 2016 to April 2017 due to extension of lease.

5b Area under backfilling of mined out area

As per approved Mining Plan, there was proposal for backfilling of about 6.08 Ha of void area within the lease during the valid plan period 2016-17 to 2019-20 (2015-16 was lapse period).

Upto 2015-16 (and upto January, 2017), about 0.84 Ha area was backfilled.

During 2016-17, the mine was not in operation.

5c Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)

As per approved Mining Plan dated 12.09.2016, there was proposal for concurrent spreading of top soil over worked out area.

Three top soil dumps were present on the SW and Northern part of the lease area. Concurrent top soil spreading was also done on the Northern and Central part of lease area.

5d Total area fully reclaimed rehabilitated

During the approved plan period of 2016-17 to 2019-20 (2015- reclaimed. No 16 was lapse was proposal backfilling/re clamation of

about 6.08 Ha area out of 15.026 Ha of excavated area. There was no

proposal for rehabilitation during the plan period. It was

proposed that there will be simultaneous spreading of top soil over backfilled area.

Upto 2015-16 (and upto January, 2017), about 0.84 Ha area was backfilled and rehabilitaion of the period), there area was done as it was not proposed during the plan period.

5e General remarks of inspecting officers on backfilling and reclamation etc. 12.09.2016

As per approved Mining Plan dated valid for the plan period 2016-17 to 16 was lapse was proposal of backfilling/re April, 2017. clamation of about 6.08 Ha of void area within the lease during the plan period. No Rehabilitation

was proposed during the plan period.

About 0.84 Ha area was backfilled and reclaimed. No rehabilitaion was done. As on date of inspection the mine was not in operation. The proposed excavation and 2019-20 (2015- subsequent backfilling could not be achieved by period), there the lessee due to nonoperational status of mine from March 2016 to

Progressive Mine Clousre Plan:

Sl.No. Item Propasals Actual work Remarks ба Whether Annual No such The Annual Report on report on PMCP proposal was PMCP under Rule- 26(2) submitted on there in the of MCDR, 2017 was not submitted by the party time and approved correctly. Rule Mining Plan for the period 2015-16, 23 E(2). dated thew same was pointed 12.09.2016, out to the party in the valid for the form of violation letter plan period issued vide letter no. BIH/GUM/BX/216/RRO, 2016-17 to 2019-20 (2015- dated 29.05.2017. 16 was lapse period). 6b Area available No proposal Upto 2015-16 (and upto was available. January, 2017), about rehabilitation Only 0.84 Ha area was (ha) . backfilling/re backfilled and clamation reclaimed. No proposal was rehabilitaion of the available for area was done as it was 6.08 Ha area not proposed during the during the plan period. plan period 2016-17 to 2019-20 (2015-16 was lapse period).

6c afforestation done (ha).

The year wise plantation As per proposal, 9150 done along the 7.5m nos. of plants safetry barrier was as were proposed given below:to be planted i. 2010-11: N.A; covering an ii. 2011-12: N.A; area of about iii. 2012-13: 100 nos.; 3.66 Ha during iv. 2013-14: Nil; the plan v. 2014-15: 100 nos.; period 2016-17 vi. 2015-16: 100 nos; to 2019-20 vii. 2016-17: Nil. (2015-16 was lapse period). Within 7.5m safety barrier, total 1000 no. of plantation was proposed @ 250 plants/year covering 0.4 Ha area and on Reclaimed area, total 8150 no. of plantation was proposed covering 3.26 Ha area. The year wise plantation schedule on Reclaimed area is given below:i. 2016-17: 900 nos.(0.36 Ha); ii. 2017-18: 1675 nos.(0.67 Ha);

The year wise plantation schedule on Reclaimed area(Contd.) is given below:- iii. 2018-19: 1350 nos.(0.54 Ha); and iv. 2019-20: 4225 nos.(1.67 Ha). The mine was not in operation during 2016-17.

6d	No. of saplings planted during the year	16 was lapse		
бе	Cumulative no .of plants	There was no proposal for cumulative plantation. However, during the plan period 2016-17 to 2019-20 (2015-16 was lapse period), about 9150 nos. of plantation were to be done over an area of 3.66 Ha.	On cumulative basis about 300 nos. of plantation were done by the lessee during 2010-11 to 2015-16 covering about 0.10 Ha area within 7.5m safety barrier.	The mine was not in operation during 2016-17.
6f	Any other method of rehabilitation	No further proposal was available in the approved Mining Plan.	Not applicable.	
6g	Cost incurred on watch and care during the year	No proposal was available in the approved Mining Plan dated 12.09.2016.	Cost incurred on watch and care was reported to be about Rs.1,50,000/-during the year 2015-16.	

бh Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx period of вхр

area was backfilled during the 2016-17 to 2019-20. The dimension of to be available for backfilling was 153m X 64m backfilled. X 10m encompassing 0.85 Ha area during the plan period 2016-17.

About 6.08 Ha About 0.84Ha area was backfilled and reclaimed proposed to be on the Northern part (South of Quarry no. 3) and Central part (West approved plan of Quarry no. 2 & 4) of lease area. On the Northern part i.e South of Quarry no. 3 about 85m X 32m X 4-5m area void proposed and at the Central part i.e West of Quarry no. 2 & 4 about 30m X 22m X 6-6.5m area was

бi Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings

There was proposal for 6.08 Ha of the last approved Mining Plan valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period) by using about 327570 Cu.m of OB/Waste material.

Upto 2015-16 (and upto January, 2017), about 0.84 Ha area was backfilling in backfilled. The quantum of material used for backfilling was not available.

The mine was not in operation during 2015-16.

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	2016-17 to	No plantation has been done over backfilled area. However, during the year 2015-16 about 100 nos. of plantations were done by the lessee along the 7.5 m safety barrier. During 2016-17, no plantation was done by the lessee as the mine was not in operation during 2016-17.	
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	There was no such proposal in the approved Mining Plan dated 12.09.2016.	No water reservoir was constructed.	
61	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	There was no other proposal in the last approved Mining Plan valid for the plan period 2016-17 to 2019-20 (2015-16 was lapse period).	Not applicable.	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	There is no recorded Waste land within the lease area.	Not applicable.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	There was no such proposal as no waste land existed in the lease area.	Not applicable.	

60	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal available.	Not applicable.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	No specific proposal was available.	During the period 2015- 16 to 2016-17, no information about environmental monitoring carried out in and around the lease area was available.	
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	16 was lapse		During 2016-17, the mine was not in operation.

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 in the approved Mining Plan. There was proposal for grade wise sorting within the lease.

Bauxite of this mine was pre-dominantly Gibbsitic i.e tri-hydrate (Al2O3.3H2O). About 70-75% of the ore was Gibbsitic and rest 30-25% was Bohemitic i.e mono-hydrate (Al203.H20). The year wise dispatch figure was as given below:i. 2010-11: 10035 MT(Al2O3: 40-45%); ii. 2011-12: 3773.13 MT(Al2O3: 40-45%) & 12081.085 MT (Al203: 45-50%); iii. 2012-13: 189.610 MT(Al2O3: 40-45%) & 2216.450 MT (Al2O3: 45-50%); iv. 2013-14: Nil; v. 2014-15: 22499.795

MT(Al2O3: 45-50%);

vi. 2015-16: 48431.030 MT(Al2O3: 40-45%); vii. 2016-17: Nil. During 2016-17, the mine was not in operation.

7b wise mineral sorting i.e. manual or mechanical.

and blending to ensure the was proposed in the last approved Mining Plan.

Method of grade- Manual sorting Manual grade wise sorting, manual screening(for fraction required grade above 1" size) followed by blending with suitable grade was practiced at the mine site during the year 2015-16. 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.

Different grade 7с of mineral sorted out at mines.

No specific proposal was there in the Mining Plan.

Generally two types of ore stack were made within the mine site. last approved One was of 40-45% Al2O3 and the other of 45-50% Al203 grade material. The low grade ore was blended with high grade material in appropriate calibrated proportion before dispatch to maitain the required grade to be dispatched to consignee.

7d	Any beneficiation process at mines .	mineral	No mineral beneficiation was done, only manual sorting, screening and sizing were done at the mine site.	
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	grade Bauxite will be hand sorted and suitably blended to	No mineral 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:- i. 2010-11: 38 nos.; ii. 2011-12: 15 nos.; iii. 2012-13: 16 nos.; iv. 2013-14: 03 nos.; v. 2014-15: 19 nos.; vi. 2015-16: 22 nos.; and vii. 2016-17: 01 no.	The mine was not in operation during 2016-17.

Envi	ronment	:

Sl.No.	Item	Propasals	Actual work	Remarks

8a Separate removal In the and utilization of topsoil (Rule Mining Plan 32)

approved plan period 2016-17 to 2019-20 (2015- utilized for 16 was lapse was proposal for separate removal of top soil, stacking of top soil in the earmarked dump(top soil) and simultaneous spreading of the same over backfilled area. The top soil removal proposal was as under:i. 2016-17: 18009 cu.m; ii. 2017-18: 25278 cu.m; iii. 2018-19: 27809 cu.m; and iv. 2019-20:

The top soil removal figure is not available. The top soil so valid for the generated, was dumped on the SW and Western part of lease area and also simultaneous spreading period), there over backfilled area.

The mine was not in operation during 2016-17.

Concurrent use or storage of topsoil

8b

As per approved Mining Plan, there was proposal for simultaneous spreading of top soil over backfilled area.

30927 cu.m.

There were three (03) top soil dumps was present within the lease area. Two (02) were on the SW part of lease area and the other one was present on the Northern part, on the West of Quarry no. 2 & 4 merged. Concurrent top soil spreading was done on the Northern and Central part of lease area on the South of Quarry no.3 and on the West of Quarry no. 2 & 4 (Merged) respectively.

8c

Separate dumps for overburden, waste rock, rejects and fines (Rule 33)

As per approved Mining Plan dated 12.09.2016, plan period 2016-17 to 16 was lapse was no proposal for dumping of Top area. soil and OB material within the lease area. There was no proposal for Mineral Reject dump either. Concurrent backfilling with simultaneos spreading of top soil was proposed during the plan period. Further, there was proposal of rehandling of 4 dumps, viz. D2(East of Q2&4), D1B(South of 02&04), D1A((South of Q2& Q4) and D3(Northern Part).

Separate dumps of Top soil and OB/Waste existed in the lease area. Total 7 nos. of dumps existed within the valid for the lease area. The type and dimension of dumps are given at para 4(c). 2019-20 (2015- No fresh dump was created during 2015-16 period), there and 2016-17. There was no Mineral Reject/Fines dump within the lease

8d Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use

There was proposal for 6.08 Ha of the last approved Mining Plan valid for the plan period 2016-17 to

2019-20 (2015-16 was lapse period) by using 327570 Cu.m of OB/Waste material. During 2016-17, it was proposed to use 59058 Cu.m of OB/Waste material.

The quantity of OB/Waste material used during 2015-16 and 2016-17, for backfilling in backfilling was not available.

During 2016-17, the mine was not in operation.

Phased 8e restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)

8f

Baseline information on existence of plantation and additional plantation done (Rule 41)

Phase wise restoration, reclamation and of land have not been proposed in the approved Mining Plan.

No existing reported in the approved Mining Plan. It was proposed that 1000 nos. of plantation were to be done over an area of 0.4 Ha along the safety barrier of lease area and 8150 nos. of plantation were to be done over an area of 3.26 Ha over the reclaimed area during 2016-17 to 2019-20 (2015-16 was

lapse period).

As per available record, upto 2015-16 (and upto January, 2017), about 0.84 Ha area was rehabilitation backfilled. Phase wise restoration, reclamation and rehabilitation of land affected by mining operations were not available.

During the year 2015-16 plantation was about 100 nos. of plantations were done by the lessee covering an area of about 0.1 Ha. No plantation was done during 2016-17 as the mine was not in operation due to extension of lease.

8g	Survival rate	No specific proposal was made in the approved Mining Plan regarding survival rate.	During the period 2015- 16, the survival rate was around 40% as reported by the mine management in the Annual Return for the year 2015-16.	No plantation was made during the year 2016-17.
8h	Water sprinkling on roads to control airborne dust	specific	Water sprinkling was done as and when required in dry season. During 2016-17, no water sprinkling was done as the mine was not in operation.	
8i 	General remarks of inspecting officer on aesthetic beauty in and around mines area	No such proposal was available in the valid approved Mining Plan.	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 7.792 Ha out of total lease area of 49.069 Ha thus only about 17% area was covered under excavation. The general aesthetic beauty of the lease area was not disturbed as such.	
Comp	oliance of Rule	45:		

Actual work

Remarks

Propasals

Sl.No.

Item

9a Status of submission of Monthly and Annual returns

The information furnished in Annual Return for the year Part-I of General information about mine and with required 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 the Monthly return regularly during the year 2015-16. They had also submitted the Annual Return for 2014-15 covers the year 2015-16 within stipulated time. In both type of returns, all the fields were filled up information.

The mine was not in operation from March, 2016 to April, 2017 for extension of lease.

Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager

9b

was 'A'-FM category, a Whole time Mining Engineer and a whole time Geologist were to be appointed as per Rule-55(3) with due intimation of the same in Form-H under Rule-46 of MCDR, 2017.

Since the mine Name of full time Mining Engineer and Geologist were submitted in the Annual return for the year 2015-16.

9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	in the Annual Return for the year 2015-16 was as under:- i. Area under excavation: 7.792 Ha; ii. Reclaimed: 0.47 Ha;	i. Quarry- 7.792 Ha (including 0.014 Ha in Forest land); ii. Backfilled area: 0.84 Ha iii. Infrastructure & Road- 1.102 Ha (including 0.120 Ha in Forest land); iv. O.B Dump: 0.906 Ha	
9d	Scrutiny of Annual return on afforestation	of the Annual Return for the year 2015-16, the plantation	The information furnished was found to be correct as during the period under review about 100 plantation was done along the safety barrier during the year 2015-16.	No plantation was done during the year 2016-17 as the mine was not in operation.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)		No Mineral Reject generation was reported from the mine during the period 2015-16.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	2(A), of the Annual Return	The figure given for Opening stock and Closing stock were in conformable with the figure furnished through Monthly Returns for the year 2015-16.	

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	price and production cost were shown Part-VI and VII of the	was shown as Rs. 400/- and cost of production	
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 2015-16 as Nil.	2 - 2	
9k	Scrutiny of Annual return on mining machineries		i. DTH drill: 01 no.	The mine was not in operation during the year 2016-17.

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

Violation observed					Show couse position				
Rule NO.		Issued on	Compliance of	on Rule	NO. I	Issued	on Compliance	on	
MCDR17	Rule 11(1)	29/05/2017							
MCDR17	Rule 26(2)	29/05/2017							
MCDR17	Rule 28(1)	29/05/2017							
MCDR17	Rule 31(4)	29/05/2017							
MCDR17	Rule 32(1)(a	29/05/2017							
MCDR17	Rule 32(1)(29/05/2017							
MCDR17	Rule 32(1)(29/05/2017							
MCDR17	Rule 32(1)(29/05/2017							
MCDR17	Rule 33	29/05/2017							
MCDR17	Rule 36(3)	29/05/2017							

Date : (N.K.CHATERJI)

Indian Bureau of Mines