INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Ranchi regional office

Mine file No : BIH/GLA/BX/210/RRO **Mine code : 07BHR32011**

(i) Name of the Inspecting Officer and ID No. : **C001) N.K.CHATERJI**

(ii) Designation : Assistant Mining Geologis

(iii) Accompaning mine Official with Designation : S/SRI S.N.VERMA AND LALIT KUMAR, REPRESENTATIVE OF LE

(iv) Date of Inspection : 09/02/2017

(v) Prev.inspection date : 26/07/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **JOBHIPAT**

(b) Registration NO. : **IBM/4146/2011**

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : JHARKHAND
District : GUMLA
Village : NARMA
Taluka : BISHUNPUR
Post office : JOBHIPAT
Pin Code :
FAX No. : NIL
E-mail : NIL
Phone : 0651-3090277

(f) Police Station : BISHUNPUR

(g) First opening date : 01/07/1974

(h) Weekly day of rest : THU

2. Address for correspondance : VILL-NARAMTOLA
BISHUNPUR
DIST-GUMLA

3. (a) Lease Number : BHR0254
(b) Lease area : 129.45
(c) Period of lease : 20
(d) Date of Expiry : 17/05/1994

4. Mineral worked : BAUXITE Main

5. Name and Address of the

Lessee : O.P.GUPTA & CO.
64,CICULAR ROAD RANCHI
RANCHI JHARKHAND
Phone:0651-204326,309753
FAX :

Owner : O.P.GUPTA
64,CIRCULAR ROAD RANCHI
JHARRKHAND RANCHI JHARKHAND
Phone:
FAX :

6. Date of approval of Mining Plan/Scheme of Mining :

Renewal under rule 24 MCR1960	08/02/1995
Mining Scheme rule 12 MCDR1988	13/12/2002
Mining Scheme rule 12 MCDR1988	13/06/2013

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	The last approved Scheme of Mining dated 13.06.2013 was valid for the plan period 2009-10 to 2013-14 (2009-10 to 2011-12 were lapse period). No furher valid approved document was available. It was proposed to give 13 nos. of BHs (coring type) during the plan period 2013-14.	No exploration was carried out during 2013-14. Hence backlog of 13 BHs still existed on the date of inspection.	The mine became non-operative from November, 2010.
1b	Exploration over lease area for geological axis 1 or 2	The last approved Scheme of Mining dated 13.06.2013 was valid for the plan period 2009-10 to 2013-14 (2009-10 to 2011-12 were lapse period). No furher valid approved document was available. It was proposed to give 13 nos. of BHs (coring type) during the plan period 2013-14.	During 2011 total 28 nos. of DTH were given by the lessee in the lease. 24nos. of DTH(Noncoring type) were given at agrid interval of 100m X 100m and 4 DTH (Non-coring type) were driilled at agrid interval of 50m X 580m with total meterage 285.7m, having maximum depth of 11.0m and minimum depth of 10.0m and avg depth of 10.20m. The proposed exploration of 13 BHs (Coring type), was to be given during 2013-14, could not be given by the lessee as the mine became non-operative from December, 2010.	--

1c	Exploration Agencies and Expenditure in lakh rupees during the year	No proposal was there in the last approved Scheme of Mining dated 13.06.2013, valid for the plan period 2009-10 to 2013-14 (2009-10 to 2011-12 were lapse period).	No information was available.	--
1d	Balance area to be explored to bring Geological axis in 1 or 2	No valid approved proposal was available. As per last approved Scheme of Mining, valid upto 2013-14, it was proposed to explore about 9.0 Ha of Non-Forest area on the Northern and SE part of lease area during the year 2013-14 under G1 and G2 level.	The proposed exploration was not carried out during the year 2013-14 as the mine became non-operative from December, 2010. During 2011, through 28 nos. of DTH, about 17.5 Ha area of Non-Forest land was explored.	--

1e	Balance reserve as on 01/04/20	No valid approved proposal was available. As per approved Schemev of Mining, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), the Reserve/Resource as on 01.04.2012 was as given below:-
		i. Reserve(111): 3360725 MT;
		ii. Probabale(122): 666655 MT;
		iii. Feasibility Mineral Resource(211): 920924 MT; and
		iv. Pre-Feasibility MIneral Resource(222): 1137823 MT.
			Since, the mine was not in operation from December, 2010, the Reserve/Resource position will remain the same. Hence as on 01.01.2017, the Reserve/Resource position was as given below:-
			i. Reserve(111): 3360725 MT;
			ii. Probabale(122): 666655 MT;
			iii. Feasibility Mineral Resource(211): 920924 MT; and
			iv. Pre-Feasibility MIneral Resource(222): 1137823 MT.
				--

1f	General remarks of inspecting officers on geology, exploration etc	No valid approved proposal was available. The Aluminium ore of the lease area was predominantly Gibbsitic(Tri hydrate). The topmost layer of the deposit was of Top soil with maximum thickness of about 1.5m, followed by Laterite/Morr um with maximum thickness of about 2.6m. The Aluminium Ore lies below Laterite/Morr um with maximum thickness of about 6m followed by lIthomargic clay with max. thickness of 0.6m. There was proposal of exploration through 13 BHs during the plan period 2013-14.	The proposed exploration could not be carried out by the lessee due to non-operative status of the mine. Previously, during 2011, 28 nos. of DTH were given in the area, out of which, 24nos. of DTH (Non coring type) were given at agrid interval of 100m X 100m and 4 DTH (Non-coring type) were driilled at agrid interval of 50m X 580m with total meterage 285.7m, having maximum depth of 11.0m and minimum depth of 10.0m and avg depth of 10.20m.	Bauxite deposit of the area is associated with laterite/morrum, with concretionery structure and occurs as irregular and discontinuous lenses or tabular bodies within the laterite capping.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks

2a	Location of development w.r.t.lease area	No valid approved proposal was available. As per last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14(2009-10 to 2011-12 was lapse period), SE portion of the lease area was proposed to be developed covering 7.24 Ha area with backfilling of 4.38 Ha area. No valid approved proposal was available after 2013-14.	As per proposal, no development work was carried out. Altogether 09 quarries were developed in the lease area. The average dimension of quarries were as given below:- i. Quarry no. 1: 400m X 140m X 4.5m; ii. Quarry no. 2: 145m X 100m X 3.5-4m; iii. Quarry no. 3: 130m X 30-35m X 3m; iv. Quarry no. 4: 300m X 85m X 5m; v. Quarry no. 4A: 50m X 30m X 2m; vi. Quarry no. 5: 155m X 35m X 4m; vii. Quarry no. 6: 60m X 55m X 1.25m; viii. GK Quarry: 100m X 30m X 3.5m; ix. DQ Quarry: 95-100m X 25m X 2.5-3m.	The non-submission of document was pointed out to lessee in the form of Violation letter issued vide letter no. BIH/GLA/BX/210/RRO , dated 17.03.2017 along with other provisions od MCDR, 2017.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No valid approved document was available. The last approved Scheme of Mining was valid upto 2013-14.	Seprate benches were made in Soil, Morrum/Laterite and Mineral in all the quarries. The quarry wise bench dimension is given below:-
			i. Q1: OB-01 bench(0.5m-TS) and Ore-01 bench(4m);
			ii. Q2: OB-02 benches(0.5m-TS+0.5m Morrum) and Ore-01 bench(3m);
			iii. Q3: 02 benches(Ore-1.5m height each);
			iv. Q4: OB-01 bench(1.5m-TS+Morrum) and Ore-01 bench(3.5m);
			v. Q4A: OB-01 bench(0.5m-TS) and Ore-01 bench(1.5m);
			vi. Q5: OB-02 benches(0.5m-TS+0.5mMorrum) and Ore-01 bench(3m);
				vii. Q6: OB-01 bench(0.75m-TS) and Ore-01 bench(0.5m);
				viii. G.K Quarry(Muri Khanta): OB-Nil and Ore-01 bench(3.5m);
				ix. DQ Quarry(Durgapur Quarry): OB-Nil and Ore-01 bench(2.5-3m).

2c	Stripping ratio or ore to OB ratio	No valid approved proposal was available. The last approved Scheme of Mining was valid for the period 2012-13 to 2013-14, during the period, the stripping ratio was proposed to be 1:0.51.	Mine is not in operation since December, 2010 hence the Stripping ratio could not be calculated. During 2010-11, the stripping ratio was calculated to be 1: 0.83. The production during 2010-11 was 5400 MTand OB generation was 4500 cu.m.	--
2d	Quantity of topsoil generation in m3	No valid approved proposal was available. The last approved Scheme of Mining was valid upto 2013-14. As per last approved Scheme of Mining the top soil generation figure was as given below:- i. 2012-13: 59271 MT; and ii. 2013-14: 67611 MT.	The top soil generation figure was not available. The mine is not in operation since December, 2010.	--
2e	Quantity of overburden generation in m3	No valid approved proposal was available. The last approved Scheme of Mining was valid upto 2013-14. As per last approved Scheme of Mining the OB generation figure was as given below:- i. 2012-13: 211959 MT; and ii. 2013-14: 209716 MT.	The Overburden generation figure for last five years are given below:- i. 2010-11: 9000 MT; ii. 2011-12: Nil; iii. 2012-13: Nil; iv. 2013-14: Nil; v. 2014-15: Nil; vi. 2015-16: Nil; and vii. 2016-17: Nil.	The mine is not in operation since December, 2010.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No valid approved proposal was available. As per last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14(2009-10 to 2011-12 was lapse period), SE portion of the lease area was proposed to be developed covering 7.24 Ha area with backfilling of 4.38 Ha area. The deposit was of massive type with predominantly Bohemitic (Trihydrate, Al2O3. 3H2O), Gibbsitic (Monohydrate, Al2O3.H2O) ore also occured in the area.	As per proposal, no development work was carried out since the mine became non-operative from December, 2010. Altogether 09 quarries were developed in the lease area. The average dimension of quarries are given under para 2(a). As on date of inspection about 15.13 Ha area was covered under excavation with 4.78 Ha of backfilled area.	--

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks

3a	Number of pit proposed for production	No valid approved proposal was available. The last approved Scheme of Mining was valid upto 2013-14 wherein it was proposed to develop only one quarry on the Northern part of Quarry no. 5, near BP no. 47, on the SE part of lease area.	In actual practice 09 quarries were developed for production viz. quarry no. 1, 2, 3, 4, 4A, 5, 6, GK quarry(Muri Khanta) and DQ(Durgapur quarry) were developed on the Southern part of the lease. The details of quarry dimension has been given at Para no. 2(a).	The mine was not in operation from December, 2010.
3b	Quantity of ROM mineral production proposed	No valid approved proposal was available. The last approved Scheme of Mining was valid for the period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period). However the proposed ROM mineral production for the Scheme period was given below:- i. 2009-10: 3650 MT(Actual); ii. 2010-11: 5400) MTActual); iii. 2011-12: Nil(Actual); iv. 2012-13: 417612 MT; v. 2013-14: 420227 MT.	The Bauxite production figure for last eight years are given below:- i. 2009-10: 3650 MT; ii. 2010-11: 5400 MT; iii. 2011-12: Nil; iv. 2012-13: Nil; v. 2013-14: Nil; vi. 2014-15: 4088 MT; and vii. 2015-16: Nil; and viii. 2016-17: Nil.	The mine became non-operative from December, 2010.

3c	Recovery of sailable/usable mineral from ROM production	No valid approved proposal was available. As per last approved Scheme of Mining, the proposed recovery percentage was around 80%.	Recover percentage could not be calculated as the mine was not in operation during 2015-16 or 2016-17. As per last ROM production figure of 2010-11, the recovery was around 40%.	--
3d	Quantity of mineral reject generation	There was no valid approved proposal was available. However, as per last approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was no proposal for Mineral reject generation.	No Mineral Reject generation was reported from the mine upto the period of its operation , i.e upto November, 2010. Presently the mine is not in operation from December, 2010.	--
3e	Grade of mineral rejects generation and threshold value declared.	No proposal was available in the last approved Scheme of Mining. No valid approved document is available for the period 2014-15 onwards. As there was no proposal for Mineral Reject generation hence grade of mineral reject is irrelevant. The Threshold value of Bauxite is Al2O3- 30% with SiO2- < 5%.	No reject generation was reported during the period of its operation hence grade of mineral reject is irrelevant. The Threshold value of Bauxite is Al2O3- 30% with SiO2- < 5%.	--

3f	Quantity of sub grade mineral generation.	There was no proposal for Sub-grade mineral generation.	No sub-grade Mineral production was reported 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.	--
3g	Grade of sub grade mineral generation	There was no proposal for Sub-grade mineral generation during the plan period 2012-13 to 2013-14, hence grade of the same was not applicable. Further no valid approved document for the period 2014-15 onwards was available.	Not applicable as there was no sub-grade generation reported from the mine during the plan period.	The mine is not in operation from December, 2010.

3h	Manual / Mechanised method adopted for segregating from ROM	No valid approved document was available. However, as per last approved SCheme of Mining, 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 Ore after blasting was segregated manually from ROM. The large lumps of Ore were broken into small pieces(10 cm size).	--
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	There was no proposal in the last approved Scheme of Mining, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), regarding analysis or beneficiation study for sub-grade mineral and reject as such there was no proposal for sub-grade and Reject generation from the mine.	As there was no sub-grade and mineral reject generation reported from the mine hence no such analysis or beneficiation study of sub-grade mineral and reject was carried out at the mine.	--

3j	Provision of drilling and blasting in mineral benches	No valid approved proposal was available. However, there was proposal for drilling and blasting in mineral bench in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14. In OB and Ore, the depth of holes were propopsed to be 3.3m and 6.6m respectively(including 10% of SG drilling).	As per proposal bore holes were done in hard formation by Wagon drill having 100 mm dia. The holes were made upto 3.3m in Laterite & upto 6.6m in Ore formation with burden and spacing were maintained at 2m & 2.5m respectively in OB and 3m & 3m respectively in Ore. Each hole was charged with Power gel with different quantity for Laterite & Bauxite horizon. Shot firing was also done with Safety Fuse(SF) and Ordinary Detonator(OD).	In general the blasting pattern was adopted with single row of 10-15 holes in one round.
3k	Provision of mining machineries in mineral benches	No valid approved proposal was available. However, there was proposal for using machinery in mineral bench in the last approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14.	During the time of its operation, the following machineries used were :- i. Wagon drill(100 mm)- 1 no. for drilling; ii. Compressor (300 cfm)- 1 no. ii. Shovel (0.9 cu.m)- 2 nos.; iii. Hiwa (25 MT)- 3 nos. etc.	The mine is not in operation from December, 2010.

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	No valid approved proposal was available. However as per last approved Scheme of Mining, the dimension of benches in OB and Ore were proposed to be maitained within 6m X 6m, which was in conformable with the proposed method of working under 'A'-FM category of opencast mining.	In actual practice the height of the benches were maintained at 1.5m - 3.5m and width has been maintained at 2-3m both in Ore and OB which was within stipulated dimension for method of mining proposed in the approved Scheme of Mining under 'A'-FM category.	Last production reported from the mine was in November, 2010, no further working was reported after that.
3m	Total area covered under excavation/pits	No valid approved proposal was available for the period 2014-15 onwards. There was proposal to excavate 7.24 Ha area during the plan period 2012-13 to 2013-14 and upto the plan period 2013-14, a cumulative of about 22.37 Ha area was proposed to be excavated.	During 2015-16 and 2016-17, no area was covered under excavation as the mine was not in operation. However, Upto 2013-14, about 15.13 Ha area was covered under excavation as reported in the approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14(2009-10 to 2011-12 were lapse period). The mine became non-operative from December, 2010, hence the proposed excavation could not be carried out.	--

3n	Ore to OB ratio for the pit/mine during the year.	No valid approved proposal was available. The last approved Scheme of Mining was valid for the period 2012-13 to 2013-14, during the period, the stripping ratio was proposed to be 1:0.51.	Mine is not in operation since December, 2010 hence the Stripping ratio could not be calculated. During 2010-11, the stripping ratio was calculated to be 1: 0.83. The production during 2010-11 was 5400 MTand OB generation was 4500 cu.m.	--

3o	Total area put in use under different heads at the end of year	No valid approved proposal was available. However, as per approved Scheme of Mining dated 13.06.2013, the total area put to use after completion of 5 years working i.e at the end of 2013-14, was proposed to be :- i. Quarry- 22.37 Ha (Including backfill of 9.16 Ha); ii. Road- 1.94 Ha; iii. Infrastructure - 0.09 Ha; iv. Green belt- 0.35 Ha; v. Dump: 1.07 Ha; and vi. Pond: 0.04 Ha. vii. Total area put to be under use- 25.86 Ha; viii. Balance land unused- 103.585 out of total lease area of 129.445Ha.	Upto 2015-16 and 2016-17, the total area put to use was as under:- i. Quarry: 15.13 Ha (Including backfill of 4.78 Ha); ii. OB dump: 1.07 Ha; iii. Infrastructure- 0.09 Ha; iv. Road: 1.94 Ha; v. Pond: 0.04 Ha. vi. Total area put to use- 18.27 Ha; vii. Balance land unused- 111.175 Ha, out of total lease area of 129.445 Ha.	The mine is not in operation from December, 2010.

3p	Production of ROM mineral during the last five year period as applicable	No valid approved proposal was available. The last approved Scheme of Mining was valid for the period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period). However the proposed ROM mineral production for the Scheme period was as given below:- i. 2009-10: 3650 MT(Actual); ii. 2010-11: 5400) MTActual); iii. 2011-12: Nil(Actual); iv. 2012-13: 417612 MT; v. 2013-14: 420227 MT.	The Bauxite production figure for last eight years are given below:- i. 2009-10: 3650 MT; ii. 2010-11: 5400 MT; iii. 2011-12: Nil; iv. 2012-13: Nil; v. 2013-14: Nil; vi. 2014-15: 4088 MT; and vii. 2015-16: Nil; and viii. 2016-17: Nil.	The mine became non-operative from December, 2010.
3q	General remarks of inspecting officers on method of mining etc.	As per approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), the mine was proposed to be operated by opencast method under 'A'-FM category with bench dimension of 6m X 6m both in OB and Ore.	In actual practice, the mine was worked under 'A'-OTFM category before approval of SCheme of Mining. During the last working year 2010-11 the mine worked by deploying machineries like- Wagon drill(100mm), Shovel with 0.9 cu.m bucket capacity, 25 tonners Hiwa, Air compressor of 300cfm etc. In actual practice the height of the benches were maintained at 1.5m - 3.5m and width has been maintained at 2-3m both in Ore and OB. The mine was in operation through contractors.	The mine was not in operation from December, 2010.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No valid approved proposal was available after 2013-14. As per last approved Scheme of Mining, dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was proposal to dump the top soil on the extreme SE corner of lease during 2012-13(1st year of development) and from 2013-14, the top soil was proposed to be spread over backfilled area. There was no proposal of OB/Waste dump as the OB consisted mostly of top soil and some Laterite/Morrum.	Due to non-operational status of the mine from December, 2010, the mine could not be developed and as such no fresh top soil dump was created. In the lease area 3 nos. of old Top soil/Morrum dumps existed on the SE part of lease area. There was no OB/Waste and Mineral Reject dump existed within the lease area.	--

4b	Location of topsoil, OB and mineral reject dumps	No valid approved proposal was available after 2013-14. As per last approved Scheme of Mining valid upto 2013-14, the location of top soil dump was proposed on the extreme SE corner of the lease. There was no proposal for creation of OB and Mineral Reject dump within the lease area.	No fresh top soil dump was created. In the lease area 3 nos. of old top soil dumps existed on the SE part of lease area. There was no OB/Waste and Mineral Reject dump existed within the lease area. The existing top soil dump also consisted of some Morrum.	--

4c	Number of dumps within lease area and outside of lease area	No valid approved proposal was available. As per last approved Scheme of Mining dated 13.06.2013, it was proposed to create one top soil dump on the extreme SE corner of lease area. There was no proposal for dumping outside lease area.	Three (03) old Soil/Morrum dump existed within the lease area on the SE part of lease. There was no dump outside lease area. The dimension of dumps were as given below:-
			i. Dump no. 1(South of Q5): 50m X 25m X 3.5m;
			ii. Dump no. 2(Northern part of Q3): 80m X 35m X 3m;
			iii. Dump no. 3(Southern part of Q3): 45m X 25m X 1m.
				The mine became non-operative from December, 2010.

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	No valid approved proposal was available. As last approved Scheme of Mining, the top soil dump was proposed to be created on the extreme SE corner of lease outside Ultimate Pit Limit(UPL).	Out of three (03) existing old top soil/morrum dumps, two (02) dumps were partly located within Jungle-Jhari area and all the three dumps were located within UPL on the SE part of the lease area.	--

4e	Number of active and alive dumps.	No valid approved proposal was available after 2013-14. As per last approved Scheme of Mining dated 13.06.2013, one active top soil dump was proposed to be created within the lease area.	The three (03) existing old top soil/morrum dumps were active upto the period of its operation, i.e upto November, 2010. After the mine became non-opereative from December, 2010, the dump became naturally stabilized in course of time.	--
4f	Number of dead dumps.	There was no proposal of dead dump in the lease area as per last approved Scheme of Mining.	After the mine became non-opereative from December, 2010, the three (03) soil/morrum dumps which were active earlier became Dead and were naturally stabilized in course of time.	--
4g	Number of dumps established.	No valid approved proposal after 2013 was available. As per approved Scheme of Mining, there was proposal for construction of Parapet wall and Garland drain around the Southern part of Top soil dump proposed to be crerated on the extreme SE corner of lease.	The mine became non-operative from December, 2010 hence the proposed Top soil dump could not be created. The existing soil/morrum dumps were not established.	--

4h	Whether Retaining wall or garland drain all along dumps are there.	No valid approved proposal was available after 2013-14. As per last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), Retaining wall and Garland drain were proposed to be constructed around the Southern part of Top soil dump, which was to be created on the extreme SE corner of lease.	The proposed Top soil dump could not be created as the mine became non-operative from December, 2010. No parapet wall and garland drain were constructed around the existing soil/morrum dump as the dumps were of low height (< 3.5m).	--
4i	Length of Retaining wall or garland drain all along dumps	No proposal for length of Retaining wall and garland drain were available in the last approved Scheme of Mining.	Retaining wall and Garland drain were not constructed along the existing dumps.	--
4j	Number of settling ponds	No such proposal was there for construction of settling pond in the approved Scheme of Mining dated 13.06.2013.	No settling pond was constructed within the lease.	--

4k	Specific comments of inspecting officer on waste dump management	No valid approved proposal was available for the period 2013-14 onwards. As per last approved Scheme of Mining, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was proposal to dump the top soil on the extreme SE corner of lease during 2012-13(1st year of development) and from 2013-14, the top soil was proposed to be spread over backfilled area. There was no proposal of OB/Waste dump as the OB consisted mostly of top soil and some Morrum.	Due to non-operational status of the mine from December, 2010, the mine could not be developed and as such no fresh top soil dump was created. In the lease area 3 nos. of old Top soil dumps existed on the SE part of lease area. There was no OB/Waste and Mineral Reject dump existed within the lease area.The existing top soil dump also consisted of some Morrum. No Parapet wall and Garland drain were constructed around the dumps as they were of low height and were within manageable limit.	The dimension of dumps have been given at para 4(c).

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.	No valid approved proposal for the period 2013-14 onwards was available. As per approved Scheme of Mining, there was proposal for part extraction of mineral before starting backfilling i.e simultaneous backfilling along with top soil spreading were proposed, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	Backfilling was started in the mine after part extraction of mineral i.e simultaneous backfilling was in practice in the mine on Southern and Central part of lease area. On Southern part, in Quarry no. 1(Western part of Q1) & Quarry no. 4(Southern part of Q4) and on Central part in DQ Quarry(Entire Durgapur quarry) backfilling/reclamation was done. About 4.78 Ha area was backfilled and reclaimed upto the date of inspection. The mine was not in operation from December, 2010.	The mine became non-operative from December, 2010.
5b	Area under backfilling of mined out area	No valid proposal was available. However, as per approved Scheme of Mining, there was proposal for backfilling of about 9.16 Ha of void area within the lease during the valid plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	Upto the date of inspection about 4.78 Ha area was backfilled.	The mine was not in operation from December, 2010.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	As per approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was proposal for concurrent spreading of top soil over worked out area. During 1st Year of development (2012-13), there was proposal to dump the top soil on the extreme SE corner of lease and from 2nd year of development (2013-14), the top soil was proposed to be spread over backfilled area for restoration of mined out area.	The proposed top soil dump on the extreme SE corner of lease could not be created as the mine became non-operative from December, 2010. Three old soil dumps were present on the SE part of the lease area. The existing soil dump also consisted of some Morrum. Concurrent top soil spreading was also done previosly on the Southern part of lease area. There was no working in the area during 2015-16 and 2016-17.	--

5d	Total area fully reclaimed and rehabilitated	No valid approved proposal was available. During the approved plan period of 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was proposal for backfilling/reclamation of about 9.16 Ha area out of 22.37 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 the date of inspection about 4.78 Ha area was backfilled and reclaimed. No rehabilitaion of the area was done as it was not proposed during the last approved plan period.	The mine is not in operation from December, 2010.

5e	General remarks of inspecting officers on backfilling and reclamation etc.	As per last approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there was proposal of backfilling/reclamation of about 9.16 Ha out of 22.37 Ha of excavated area within the lease. No Rehabilitation was proposed during the plan period.	About 4.78Ha area was backfilled and reclaimed out of 15.13 Ha of excavated area. No rehabilitaion was done. As on date of inspection the mine was not in operation. The proposed excavation and subsequent backfilling could not be achieved by the lessee due to non-operational status of mine from December, 2010.	--

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 last approved SCheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	The Annual Report on PMCP under Rule- 26(2) of MCDR, 2017 was not submitted by the party.	--

6b	Area available for rehabilitation (ha) .	No valid approved proposal was available for the period 2013-14 onwards. However as per last approved Scheme of Mining, no proposal for rehabilitation was available, only backfilling/reclamation proposal was available for 9.16 Ha area during the plan period of 2009-10 to 2013-14. 2016-17 to 2019-20 (2015-16 was lapse period).	Upto 2016-17 (January, 2017), about 4.78 Ha area was backfilled and reclaimed. No rehabilitaion of the area was done as it was not proposed during the plan period.	The mine became non-operative from December, 2010.
6c	afforestation done (ha).	As per last approved proposal, 560 nos. of plants were proposed to be planted over safety barrier and over Reclaimed area, covering an area of about 0.35 Ha during the plan period 2012-13 to 2013-14. The year wise plantation schedule is given below:- i. 2012-13: 272 nos.(0.17 Ha); ii. 2013-14: 288 nos.(0.18 Ha).	The year wise plantation done along the 7.5m safetry barrier (Within the ML area) was as given below:- i. 2010-11: 360 nos. & 400 nos.(OML); ii. 2011-12: 250 nos.; iii. 2012-13: 100 nos. ; iv. 2013-14: Nil; v. 2014-15: Nil; vi. 2015-16: Nil; and vii. 2016-17: Nil.	--

6d	No. of saplings planted during the year	No valid approved proposal was available after 2013-14 onwards.	During the year 2015-16 and 2016-17, no plantation was done as the mine was not in operation during the period under review.	--
6e	Cumulative no .of plants	There was no proposal for cumulative plantation. However, during the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), about 560 nos. of plantation were to be done over an area of 0.35 Ha.	On cumulative basis about 710 nos. of plantation were done within the lease and 400 nos. of plantation were done outside lease during 2010-11 to 2012-13 as reported by the lessee in the Annual Return.	The mine is not in operation from December, 2010.
6f	Any other method of rehabilitation	No other proposal was available in the last approved Scheme of Mining dated 13.06.2013. No further valid approved proposal was available.	Not applicable.	--
6g	Cost incurred on watch and care during the year	No proposal was available in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	No information on cost incurred on watch and care was available.	--

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No valid approved proposal was available. As per last approved Scheme of Mining, about 9.16 Ha area was proposed to be backfilled during the approved plan period of 2012-13 to 2013-14. The dimension of void proposed to be available for backfilling was not available.	About 4.78 Ha area was backfilled and reclaimed on the Southern part lease area in Quarry no. 1(Western part of Q1) &, Quarry no. 4(Southern part of Q4) and on the Central part in DQ Quarry(Entire Durgapur quarry). On the Western part of Quarry no. 1, about 270 m X 142m area, on the Southern part of Quarry no. 4 about 100m X 60m area and in DQ quarry about 80m X 40M area was backfilled.	--
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No valid approved proposal was available after 2013-14 onwards. There was proposal for 9.16 Ha of backfilling in the last approved SCheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period) by using about 631135 MT of OB/Waste material.	Upto 2016-17 (January, 2017), about 4.78 Ha area was backfilled. The quantum of material used for backfilling was not available.	--

6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No valid approved proposal was available. As per last approved proposal, 560 nos. of plants were proposed to be planted over safety barrier and over Reclaimed area, covering an area of about 0.35 Ha during the plan period 2012-13 to 2013-14. The year wise plantation schedule is given below:- i. 2012-13: 272 nos.(0.17 Ha); ii. 2013-14: 288 nos.(0.18 Ha).	No information on plantation done over backfilled area was available. However, during the year 2010-11 to 2012-13, about 710 nos. of plantations were done by the lessee along the 7.5 m safety barrier. During 2015-16 and 2016-17, no plantation was done by the lessee as the mine was not in operation during the period.	--
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	There was proposal to make a pond covering an area of 0.04 Ha in the last approved Scheme of Mining dated 13.06.2013.	No water reservoir was constructed within the lease area. A pond was constructed on the Western part of lease area covering about 0.04 Ha area.	--
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	There was no other proposal in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	Not applicable.	--

6m	Compliance of rehabilitation of waste land within lease (i)afforestation	As cper last approved Scheme of Mining, there was 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.	--
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	As per last approved Scheme of Mining, no proposal was available.	Not applicable.	--
6p	Compliance of environmental monitoring (core zone and buffer zone)	No specific proposal was available in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14.	During the period 2015-16 to 2016-17, no information about environmental monitoring carried out in and around the lease area was available.	The mine was not in operation since December, 2010.

6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	It was proposed in the last approved Scheme of Mining dated 13.06.2013, valid for the plan period 2012-13 to 2013-14, that, about 22.37 Ha area will be covered under excavation upto the plan period 2013-14. Further, during the plan period, Green belt will cover about 0.35 Ha area, about 1.94 Ha area was proposed to be covered under road, about 0.09 Ha area was proposed to be covered under Infrastructure , about 1.07 Ha area was proposed to be covered under Dump and about 0.04 Ha area under pond.	Upto 2016-17 (January, 2017), a cumulative of about 15.13 Ha area was covered under excavation including 4.78 Ha of backfilling, about 1.07 Ha area was covered under dump, about 1.94 Ha area was covered under Road, about 0.09 Ha area was covered under infrastructure and about 0.04 Ha area was covered under Pond.	--

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 last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period). There was no specific proposal for grade wise sorting within the lease as per last approved document.	Bauxite of this mine was pre-dominantly Gibbsitic i.e tri-hydrate ($Al_2O_3.3H_2O$). About 70-75% of the ore was Gibbsitic and rest 30-25% was Bohemitic i.e mono-hydrate ($Al_2O_3.H_2O$). The year wise dispatch figure was as given below:- i. 2010-11: 3300 MT(Al_2O_3: 40-45%) & 2102.57 MT (Al_2O_3: 45-50%); ii. 2011-12: Nil; iii. 2012-13: Nil; iv. 2013-14: Nil; v. 2014-15: Nil; vi. 2015-16: Nil; and vii. 2016-17: Nil.	The mine became non-operative from December, 2010.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	No valid approved proposal was available. As per last approved Scheme of Mining dated 13.06.2013, there was no specific proposal for grade wise sorting within the lease.	At present the mine is not in operation hence no grade wise sorting of mineral was done at mine site. Previously 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 2010-11 as reported. 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.	--

7c	Different grade of mineral sorted out at mines.	No specific proposal was there in the last approved Scheme of Mining dated 13.06.2013.	During operational status of mine, two types of ore stack were made within the mine site. One was of 40-45% Al2O3 and the other of 45-50% Al2O3 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.	The system followed upto 2010-11, from December, 2010, the mine became non-opeartive.
7d	Any beneficiation process at mines .	No proposal of mineral beneficiation at mine site was made in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011--12 were lapse period).	No mineral beneficiation was done, only manual sorting, screening and sizing etc. were done at the mine site upto the period the mine was in operation.	--
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No valid approved proposal after 2013-14 onwards was available.There was no specific proposal for grade wise sorting within the lease as per last approved Scheme of Mining dated 13.06.2013 valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period).	No mineral beneficiation was carried out at the mine site. For Mineral Conservation aspect, previously, lessee had deployed suitable nos. of workers for grade wise sorting, blending etc to avoid mixing of ore with deleterious material. During the year 2010-11, 24 nos. of face workers were engaged in the mine for sorting, sizing, blending etc.	The mine became non-operative from December, 2010.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No valid approved document after 2013-14 was available. In the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period), there 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. 2012-13: 59271 MT; and ii. 2013-14: 67611 MT.	The top soil removal figure was not available. The top soil so generated, was dumped on the SE part of lease area and also utilized for simultaneous spreading over backfilled area.	The mine is not in operation since December, 2010.

8b	Concurrent use or storage of topsoil	No valid approved proposal was available. As per last approved Scheme of Mining dated 13.06.2013, there was proposal for concurrent spreading of top soil over worked out area. During 1st Year of development (2012-13), there was proposal to dump the top soil on the extreme SE corner of lease and from 2nd year of development (2013-14), the top soil was proposed to be spread over backfilled area for restoration of mined out area.	Three old soil dumps were present on the SE part of the lease area. The existing soil dump also consisted of some Morrum. Concurrent top soil spreading was also done previosly on the Southern part of lease area. There was no working in the area during 2015-16 and 2016-17. The proposed top soil dump on the extreme SE corner of lease could not be created as the mine became non-operative from December, 2010.	--

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	No valid approved proposal was available after 2013-14. As per last approved Scheme of Mining, dated 13.06.2013, there was no proposal to dump the OB/Waste material, Rejects and Fines, as concurrent backfilling was proposed during the valid plan period of 2012-13 to 2013-14 in the lease area followed by top soil spreading. The OB consisted of Laterite and Morrum.	There was no dump of OB/Waste, Rejects and Fines within the lease area. There were only 3 nos. of old Top soil/Morrum dumps existed on the SE part of lease area.	--
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No valid approved propopsal after 2013-14 was available. As per last approved Scheme of Mining, valid for the plan period 2012-13 to 2013-14, there was proposal for 9.16 Ha of backfilling by using 631135 MT of OB/Waste material for restoration of land.	The quantity of OB/Waste material used for backfilling/restoration of land was not available.	--

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phase wise restoration, reclamation and rehabilitation of land was not proposed in the last approved Scheme of Mining.	As per available record, upto 2016-17 (January, 2017), about 4.78 Ha area was backfilled. Phase wise restoration, reclamation and rehabilitation of land affected by mining operations were not available.	--
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No existing plantation was reported in the last approved Scheme of Mining. It was proposed that 560 nos. of plantation were to be done over an area of 0.35 Ha along the safety barrier and over the reclaimed area during 2012-13 to 2013-14.	On cumulative basis about 710 nos. of plantation were done within the lease and 400 nos. of plantation were done outside lease during 2010-11 to 2012-13 as reported by the lessee in the Annual Return. No plantation was done during 2015-16 and 2016-17 as the mine was not in operation during the period under review.	The mine is not in operation since December, 2010.
8g	Survival rate	No valid approved proposal available. Further, no specific proposal was made in the last approved Scheme of Mining regarding survival rate.	During the period 2010-11 to 2012-13, the survival rate was around 45% within ML area and around 80% outside ML area (OML) as reported by the mine management in the Annual Return of the respective year.	--

8h	Water sprinkling on roads to control airborne dust	There was no specific proposal in the last approved Scheme of Mining valid for the plan period 2012-13 to 2013-14 (2009-10 to 2011-12 were lapse period). No further valid approved proposal was available.	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 last approved Scheme of Mining dated 13.06.2013.	The area was almost barren, devoid of thick vegetation. Only sparse vegetation was found within the lease area. The area covered under excavation within the lease area was 15.13 Ha out of total lease area of 129.445 Ha thus only about 11.68% area was covered under excavation. Protected Forest existed around the lease area. The general aesthetic beauty of the lease area was not disturbed as such.	The mine is not in operation from December, 2010.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks

9a	Status of submission of Monthly and Annual returns	The information furnished in Annual Return for the year 2015-16 covers 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 the Nil Monthly return regularly during the year 2015-16. They had also submitted the Nil Annual Return for the year 2015-16 within stipulated time. In both type of returns, all the fields were filled up with required information.	The mine is not in operation since DEcember, 2010.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Since the mine was under '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.	Name of full time Geologist was submitted in the Annual return for the year 2015-16. The name of full time Mining engineer was not submitted. The mine not in operation since long.	--

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 2015-16 was as under:- i. Area under excavation: 15.13 Ha; ii. Reclaimed: 4.78 Ha; iii. Dump are: 1.07 Ha; iv. Road : 1.94 Ha; v. Infrastructure : 0.09 Ha; vi. Others: 0.04 Ha.	Upto 2015-16 and 2016-17, the total area put to use was as under:- i. Quarry: 15.13 Ha (Including backfill of 4.78 Ha); ii. OB dump: 1.07 Ha; iii. Infrastructure- 0.09 Ha; iv. Road: 1.94 Ha; v. Pond: 0.04 Ha. vi. Total area put to use- 18.27 Ha; vii. Balance land unused- 111.175 Ha, out of total lease area of 129.445 Ha.	--
9d	Scrutiny of Annual return on afforestation	In Part-V, item no. 4.4 of the Annual Return for the year 2015-16, the plantation done was given as Nil.	The information furnished was found to be correct as during the period under review the mine was not in operation.	--
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	In Part-V, Sec 4 of the Annual Return 2015-16, the information on Mineral Reject generation was Nil.	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	In Part VI, item no. 1 & 2(A), of the Annual Return (2015-16), the ROM stock (opening balance) and Closing stock shown were as given below:- Opening stock- 40-45% Al2O3: 34.255 MT; Closing Stock- 40-45% Al2O3: 34.255 MT.	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	The sale value, ex-mine price and production cost were shown Part-VI and VII of the Annual Return for the year 2015-16.	In Part-VI, item no. 2 of the Annual Return 2015-16, the Ex-Mine price was shown as Nil, in Part-VI, item no. 4, the Sale value was shown as Nil and cost of production during 2015-16 was shown as Nil in Part-VII of the Annual Return.	--
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.	The value of Fixed Assets of the lessee for the year 2015-16 was shown as Nil in Part-IIA of the A.R, under Capital structure.	--
9k	Scrutiny of Annual return on mining machineries	In Part-V, Sec 5/6/8/9 of the Annual Return 2014-15, the machinery used was given as Nil since the mine was not in opeartion during 2015-16.	During 2015-16, no machinery was used, as the mine was not in operation during the period under review. The mine is not in operation since December, 2010.	--

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

Violation observed			Show couse position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17 Rule 11(4)	17/03/2017				
MCDR17 Rule 23	17/03/2017				
MCDR17 Rule 28(1)	17/03/2017				
MCDR17 Rule 33	17/03/2017				

Date :

(**N.K.CHATERJI**)

Indian Bureau of Mines