INDIAN BUREAU OF MINES
MINERALS DEVELOPMEMT AND REGULATION DIVISION

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/SNG/MCDR-16/BBS **Mine code : 30ORI13041**

(i) Name of the Inspecting Officer and ID No. : **S(010) SHRI G.C. SETHI**

(ii) Designation : Deputy Controller Mines

(iii) Accompaning mine Official with Designation : Shri Abhijit Sen,AVP(Geo), Shri A.S.Mohapatra, AVP(Mi

(iv) Date of Inspection : 13/07/2017

(v) Prev.inspection date : 28/07/2016

PART-I : GENERAL INFORMATION

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

(b) Registration NO. : **IBM/4570/2011**

(c) Category : A Fully Mechanised

(d) Type of Working : Opencast

(e) Postal address

State : ORISSA
District : SUNDARGARH
Village : TEHERAI
Taluka : BONAI
Post office : KOIRA
Pin Code : 770048
FAX No. : 06767276161
E-mail : teherai@yahoo.in
Phone : 06767275221

(f) Police Station : Koira

(g) First opening date : 31/12/1982

(h) Weekly day of rest : SAT

2. Address for correspondance : VILLAGE:TEHERAI, P.O.KOIRA
DIST: SUNDERGARH
ORISSA-770048

3. (a) Lease Number : ORI0131
(b) Lease area : 137.46
(c) Period of lease : 20
(d) Date of Expiry : 31/12/2001

4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : BONAI INDUSTRIAL COMPANY LTD
P.O.BARBIL KEONJHAR
ORISSA
Phone:06767-30221
FAX :

Owner : M D RUSTAGI
RUNGTA OFFICE, MAIN ROAD
BARBIL KEONJHAR, ORISSA
KEONJHAR ORISSA
Phone: 06767275221
FAX : 06767276161

Agent : A S MOHAPATRA
RUNGTA OFFICE, MAIN ROAD
BARBIL,KEONJHAR ODISHA
KEONJHAR ORISSA
Phone: 06767276161
FAX : 06767276161

Mining Engineer
Name : DIPAK KUMAR,Full Time
Qualification : BE MINING
Appointment/ Termination date : 22/06/2011

Geologist
Name : S K DE,Full Time
Qualification : MSC GEOLOGY
Appointment/ Termination date : 30/01/2013

Manager
Name : B K SRIVASTAVA
Qualification : BE MINING
Appointment/ Termination date : 08/10/2012

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

Fresh under rule 22 MCR1960	24/01/2002
Mining Scheme rule 12 MCDR1988	16/11/2007
Mining Scheme rule 12 MCDR1988	22/03/2010
Mining Scheme rule 12 MCDR1988	28/03/2012
FMCP under 23C(1)	16/01/2015
Modif.approved Mining Scheme	21/07/2015
Mining Scheme rule 12 MCDR1988	26/10/2016
MP modif under 17(3) MCR 2016	26/10/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No such proposal in the modification of approved scheme of mining. However, during the year 2016-17, it was proposed to dril 13 nos. of core bore holes.	34 nos. of core bore holes were drilled during the year 2016-17.	The achievements in exploration is in higher side of the proposed number of bore holes during the year 2016-17.
1b	Exploration over lease area for geological axis 1 or 2	No such specific proposal in the modification approved scheme of mining.	During the year 2016-17, 34 nos. of coring bore holes were drilled.	Nil
1c	Exploration Agencies and Expenditure in lakh rupees during the year	M/s V.K.S. Mining Services was the exploration agency for this mine and there is no specific proposal for expenditure on account of exploration.	During the year 2016-17, 34 nos. of bore holes were drilled in the mine & Rs. 65.25lakhs was spend for drilling above stated bore holes.	Nil

1d	Balance area to be explored to bring Geological axis in 1 or 2	An extent of 41.572ha has been explored upto G3 level & 20.888ha has not been explored so far. Therefore, the total extent of 62.46ha to be explored for G1/G2 level as per the modification of approved scheme of mining.	62.46ha to be explored for G1/G2 scale.	Nil
1e	Balance reserve as on 01/04/20	In the modification of approved scheme of mining, the reserves/resources have been estimated as on 01.04.2015 & the same is as given below:- Iron ore- Proved reserves (111): 9.378 million tonnes & Feasibility mineral resources(211) : 0.168 million tonnes. Manganese ore- Proved (111):42729 tonnes & no remaining resources have been estimated.	The reserves/resources as on 01.04.2017 is as given below: Iron Ore- Proved reserves(111): 11.231 million tonnes & remaing resources (211): 1.999 million tonnes. Manganese- Proved reserves(111): 54574.420 tonnes & no remaining resources have been estimated.	The reserves/resources have been enhanced by drilling 34 nos. of coring bore holes even after depletion of production for the years 2015-16 & 2016-17.

1f	General remarks of inspecting officers on geology, exploration etc	In the modification of approved scheme of mining, 13 nos. of coring bore holes were proposed to be drilled during the year 2016-17.	Teherai iron & manganese ore deposit forms a part of pre-cambrian sedimentary formation known as the iron ore series developed in Singhbhum-Keonjhar-Bonai area. The general strike of the formation in Northern Singhbhum is NNE-SSW but gradually changing over to NW-SE in eastern part and in adjoining area of Mayurbhanj. During the year 2016-17, 34 nos. of coring bore holes were drilled against the 13 nos. of coring bore holes proposed in the modification of approved scheme of mining.	34 nos. of bore holes were drilled during the year 2016-17 against the proposal of 13 bore holes,which is in higher side of the proposed exploration and it is a good sign for development of the mine.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	(i) E/W 600 to E/W 1100 & N/S 720 to N/S 1210 (ii) E/W 600 to E/W 600 to E/W 900 & N/S 500 to N/S 700.	(i) E/W 800 to E/W 950 & N/S 800 to N/S 1100 (ii) E/W 580 to E/W 700 & N/S 480 to N/S 600 (ii) N/S 480 to N/S 600.	Less extent of area has been degraded during the year 2016-17 as there was lack of market demand for low grade iron ore as reported during the inspection.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	There is no topsoil in the mine & no bench in topsoil was proposed. However, separate benches for overburden & ore zone are proposed as indicated in the modification of approved scheme of mining.	Separate benches are made in overburden and in ore zone.	Nil
2c	Stripping ratio or ore to OB ratio	Iron Ore 1:0.35(tonne:cum), Mn. 1: 8.9 (tonne: cum) for the year 2016-17.	Iron Ore 1: 0.59 (tonne:cum), Mn. 1: 14 (tonne:cum) for the year 2016-17.	The achieved Ore;OB ratio both for iron & Mn are in lower side of the proposed ratio even if the actual production achieved for the year 2016-17 are lower side.
2d	Quantity of topsoil generation in m3	Nil	Nil	Nil
2e	Quantity of overburden generation in m3	OB from iron ore: 272334 cum & OB from Mn.: 92400cum in the year 2016-17.	During the year 2016-17,651451.115 cum of overburden was generated from iron ore quarry & 123714.795cum of waste from manganese was generated.	Even if the waste generation was in higher side, the production reported both from iron ore and managnese quarries are in lower side,thereby the higher side deviation in waste handing arises under rule 11(1) of MCDR,2017 is ignored.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	No comment is offered.	The production of iron ore and manganese are lagging behind against the proposal envisaged in the modification of approved scheme of mining due to lack of market demand of low grade ores.	Nil

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Two nos. of pits viz. Chattan pit (iron) & Main pit (Manganese) were proposed for production during the year 2016-17.	Both the pits were under operation during the year 2016-17.	Nil
3b	Quantity of ROM mineral production proposed	During the year 2016-17, 2.496 million tonnes of iron ore & 18000 tonnes of manganese was proposed for production as envisaged in the modification of approved scheme of mining.	During the year 2016-17, 1.089 million tonnes of iron ore and 8626.540 tonnes of manganese was produced from the mine.	The production was lower side due to lack of market demand for low grade iron ore & manganese as reported during the inspection.

3c	Recovery of sailable/usable mineral from ROM production	The recovery of iron was proposed for 90% and the same for manganese was 8% as envisaged in the modification of approved scheme of mining.	The reported recovery of iron ore was about 89% and the same for manganese was about 8% .	Nil
3d	Quantity of mineral reject generation	It was proposed to generate 61900 cum of mineral reject/low grade from iron ore and 720 cum mineral reject/low grade from manganese during the year 2016-17.	No mineral reject was generated from the mine during the year 2016-17. The low grade iron ore & manganese generated from the mine was upgdaded by dry screening and made salable.	The low grade iron ore & manganese generated from the mine was upgraded by dry screening and made salable.
3e	Grade of mineral rejects generation and threshold value declared.	The grade of mineral reject/low grade for iron ore: 45-55% Fe & the same for Mn. 10-25%Mn as envisaged in the modification of approved scheme of mining.	The grades of mineral rejects of manganese contains 17.58% MnO2 and the same for iron ore is varies from 45-55%Fe.	Nil
3f	Quantity of sub grade mineral generation.	Nil	Nil	Nil
3g	Grade of sub grade mineral generation	No such proposal.	Not applicable.	Nil

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised method adopted for segregation of ROM iron ore and manual method is adopted for manganese ore as envisaged in the modification of approved scheme of mining.	The same practice is being followed as per the proposal.	Nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No such proposal.	Not applicable.	Nil
3j	Provision of drilling and blasting in mineral benches	Provisions for drilling b wagon drills of 110mm dia and blasting by putting explosives in the drilled holes in overburden as well as in ore zones.	The same practice is being followed in the mine as found during the field visit.	Nil

3k	Provision of mining machineries in mineral benches	The details of mining machineries proposed to be deployed in the mine is as given below:- Excavator 2.5cum(8 nos.), Excavator 0.9cum (10 nos.), Wagon drills 110mm dia (2 nos.), Tippers 20 tonner (27 nos.), Tippers 9 tonner(2 nos.), Rock breakers (different make 3 nos.), Loader 2.0cum (4 nos.), Pay loader 0.6cum (1no.), Dozer BEML (1no.), Mobile crusher plant 250t/hr(3 nos.), 150t/hr (3 nos.), 100t/hr(2 nos.), Mobile screening plant 250t/hr (2nos.), 150t/hr (5 nos.), 100t/hr(2 nos.) etc.	The details of mining machineries deployed in the mine is as given below:- Excavator 2.5cum (1 nos.), Excavator 1.2cum (2 nos.), Excavator 1.6cum (2 nos),Excavator 1.9cum (3 nos.) Tippers 20 tonner (23 nos.), Rock breakers (3 nos.), Loader 2.0cum (4 nos.), Dozer (1no.), Mobile crusher plant 150t/hr (1set), Mobile screening plant 250t/hr (2nos.), 150t/hr (1 no.), water tanker 12000 ltr (2 nos.) etc.	A good number of mining machinereis were deployed in the mine even if the production of iron ore and manganese during the year 2016-17 are in lower side.

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	The height of the benches in over burden & in ore zone of iron ore were proposed for 6-8m & width of 12-14m and the same for manganese 4-6m & 10-12m respectively as envisaged in the modification of approved scheme of mining.	The height & width of the benches in iron ore zone were 6-7m & width 12-14m and the same for manganese were 4-6m & 10-12 respectively.	Nil
3m	Total area covered under excavation/pits	An extent of 60.051ha.of area was proposed to be excavated by end of the year 2016-17 as envisaged in the modification of approved scheme of mining.	An extent of 57.266ha of area was degraded by current opencast working as indicated in the annual rerurn submitted by the party for the year 2016-17.	Nil
3n	Ore to OB ratio for the pit/mine during the year.	Iron Ore- 1: 0.14 9tonnes/cum), Mn- 1:5.1(tonnes/cum) for the year 2016-17.	Iron ore-1:0.59 (tonnes/cum) & Mn-1:14 (tonne/cum) during the year 2016-17.	Even if the production of iron and manganese was in lower side during the year 2016-17, the achieved Ore; OB ratio is in higher side against the proposed ratio.

3o	Total area put in use under different heads at the end of year	The item wise land use under different heads at the end of the year 2016-17 is as given below:-(i) Excavation for mining-60.051ha (ii) OB dump 12.49ha (iii) Mineral storage-9.0ha (iv) Infrastructure -1.22ha (v) Roads-1.95ha (vi) Green belt-5.61ha & (vii) Mineral Separation plant-3.885ha	As per the annual return submitted by the party for the year 2016-17, the land digradation status in different counts is as given below:- (i) Current opencast working-57.266ha (ii) Waste disposal-9.64ha (iii) Occupied by plant, buildings etc.-4.758ha & (iv) Green belt & mineral storage-11.56ha.	Nil

3p	Production of ROM mineral during the last five year period as applicable	The proposed production of manganese & iron ore during the period from 2012-13 to 2016-17 is as follows: Manganese:- 2012-13: Nil,2013-14:Nil, 2014-15: Nil, 2015-16: 18000 tonnes & 2016-17:18000 tonnes. Similarly, the production for iron ore during the above priod is as given below:- 2012-13:1432500.60 tonnes & 216500 cum of dump, 2013-14: 1402210 tonnes & 126500 cum of dump, 2014-15: 1402201 tonnes & 135000 cum from dump , 2015-16: 2.496 million tonnes & 2016-17:2.496 million tonnes.	The achivements in production of manganese & iron ore during the period from 2012-13 to 2016-17 is as given below: Manganese:- 2012-13: Nil, 2013-14: Nil, 2014-15: Nil, 2015-16: 2299 tonnes & 2016-17: 8627 tonnes. Similarly, the iron ore production duting the aforesaid period is as given below: Iron ore:- 2012-13: 424460 tonnes, 2013-14: 1001841 tonnes, 2014-15: 110470 tonnes, 2015-16: 661677 tonnes 2016-17: 1089416 tonnes respectively.	During all the above five years, the achievements in production are lagging behind the proposals, due to lack of market demand of the low grade ores.

3q	General remarks of inspecting officers on method of mining etc.	The method of mining was proposed for other than fully mechanised open cast methods in the modification of the approved scheme of mining.	The mining operations were carried out by other than fully mechanised opencast methods as per the proposal envisaged in the modification of the approved scheme of mining.	Nil

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	There is no proposal for top soil generation from the mine. However, the OB & mineral rejects (low grade ore) generated from the mine is proposed to dump separately as envisaged in the modification of approved scheme of mining.	No topsoil was generated from the mine during the year 2016-17 & no separate dumps for the same was made. The OB/waste generated were dumped in dump B & C. The mineral rejects(low grade) generated from the mine was salable.	Nil

4b	Location of topsoil, OB and mineral reject dumps	The OB was proposed to be dumped in dumps B & C as envisaged in the modification of approved scheme of mining. The mineral rejects (low grade manganese) are salable after dry screening as per the proposal.	The OB generated from the mine were dumped in dumps B & C during the year 2016-17. The mineral rejects so generated was stacked separately in the lease area due to lack of market demand for the same at the present scenario as reported during the inspection.	Nil
4c	Number of dumps within lease area and outside of lease area	Dump B & dump C are the existing dumps within the lease area as envisaged in the modification of the mining plan.	There are two active dumps are found in the mine viz. dump B & dump C.	Nil
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	The dump B & dump C are proposed beyond the ultimate pit limits as per the modification of the approved scheme of mining.	The dump B & dump C are found located beyond the ultimate pit limit.	Nil
4e	Number of active and alive dumps.	There are two active dumps viz. dump B & dump C.	The dumps B & C are active dumps as found during th field visit.	Nil
4f	Number of dead dumps.	No such proposal.	Not seen in the lease area.	Nil
4g	Number of dumps established.	No such proposal.	Nil	Nil

4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining walls for the dumps are proposed as envisaged in the modification of the approved scheme of mining.	Concrete retaining wall all along the toes of both the dumps are made with 1.5m height & 1.5m width.	Nil
4i	Length of Retaining wall or garland drain all along dumps	No specific proposal.	Concrete retaining walls & garland drains all around the toes of the dumps are made as found during the field visit.	Nil
4j	Number of settling ponds	Series of settling tanks are proposed.	Sereis of settling tanks are made for the garland drains constructed for the dumps.	Nil
4k	Specific comments of inspecting officer on waste dump management	Waste dumping was proposed in dump B & dump C as per the proposal.	Dumping is being done in dump B & C as observed during the inspection.	Nil

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.	Part backfilling of Chattan pit was proposed in the year 2016-17.	Back filling proposed for south western part of the Chattan pit was completed as per the proposal.	Nil
5b	Area under backfilling of mined out area	An extent of 1.92ha mined out area has been proposed to be backfilled in the year 2016-17.	An extent of 1.92ha of mined out area has been backfilled.	Nil

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal for topsoil generation in the modification of approved scheme of mining.	No restoration has been done during the year 2016-17.	Nil
5d	Total area fully reclaimed and rehabilitated	Only reclamation of 1.92ha of area was proposed during the year 2016-17.	An extent of 1.92ha has been reclaimed.	Nil
5e	General remarks of inspecting officers on backfilling and reclamation etc.	During the year 2016-17, an extent of 1.92ha was proposed to be reclaimed as envisaged in the modification of approved scheme mining.	An extent of 1.92ha has been reclaimed.	Nil

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	No such proposal in the modification of approved scheme of mining.	The annual report on PMCP for the year 2016-17 has been submitted by the party under Rule 26(2) of MCDR,2017.	Nil
6b	Area available for rehabilitation (ha) .	No such specific proposal for the year 2016-17.	Not applicable.	Nil

6c	afforestation done (ha).	In the year 2016-17, there are 6000 nos. of saplings were proposed to be planted but over an extent 1.92ha of bakfilled area.	During the year 2016-17, 26000 nos. of saplings were planted within the lease area. but the extent of area was not available.	More plantations were under taken in the lease area against the proposal envisaged in the modification of approved scheme of mining during the year 2016-17.
6d	No. of saplings planted during the year	Only 6000 nos. of saplings were proposed to be planted in the year 2016-17.	During the year 2016-17, 26000 nos. of saplings were planted.	The plantation done during the year 2016-17 is in higher side agianst the proposal envisaged in the modification of approved scheme of mining.
6e	Cumulative no .of plants	No such proposal.	The commulatrive plantation figures were not avialble. However, during the year 2016-17, 26000 salpings were planted.	Nil
6f	Any other method of rehabilitation	No such specific proposal in the modification approved scheme of mining.	Nil	Nil
6g	Cost incurred on watch and care during the year	No such specific proposal.	Not availble.	Nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	An extent of 1.92ha was proposed to be backfilled/reclaimed in the year 2016-17 as envisaged in the modification of the approved scheme of mining.	An extent of 1.92ha was reclaimed during the year 2016-17.	Nil

6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	An extent of 1.92ha was proposed for reclamation/backfilling in the year 2016-17.	An extent of 1.92ha was reclaimed/backfilled during the year 2016-17.	Nil
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	Proposed reclamation: 1.92ha in the year 2016-17.	Reclamation done, over an extent of 1.92ha in the year 2016-17.	Nil
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No such proposal for the year 2016-17.	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No such proposal.	Not applicable.	Nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No such proposal.	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No such specific proposal in the modification of approved scheme of mining.	Only 26000 nos. of saplings were planted during the year 2016-17.	Nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No such proposal.	Nil	Nil

6p	Compliance of environmental monitoring (core zone and buffer zone)	No such specific proposal for core zone & buffer zone has been furnished in the approved document.	The ambient air quality,water quality, noise level, vibration level etc. were being monitored in every quarter and found within the permissible limits.	Nil
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	The proposals for reclamation/backfilling followed by plantation was proposed during the year 2016-17.	Certain portion of the mined out areas have been backfilled as per the proposal during the year 2016-17.	Nil

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks

7a	ROM Mineral dispatch or grade-wise sorting within lease area	The ROM iron ore produced both from the insitu excavation & re-handling of the dump are processed through mobile screening & cursching units to get the sized ore of different grades as per the buyers specifications . In case of manganese , the ore has been proposed to be sorted out mannually for low,medium & high grade & stacked separately before despatch.	The ROM iron ore produced both from the insitu excavation & re-handling of the dump are processed through mobile screening & cursching units to get the sized ore of different grades as per the buyers specifications. In case of manganese , the ore has been sorted out mannually for low,medium & high grade & stacked separately before despatch.	Nil
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mannual sorting & sizing for manganese & mechanical screening & crushing for ROM iron ore.	Mannual sorting & sizing for manganese & mechanical screening & crushing for ROM iron ore.	Nil

7c	Different grade of mineral sorted out at mines.	As per the modification of the approved scheme of mining, the following grades of iron ore and manganese was proposed to be produced from the mine. Iron ore: +55% Fe & -55%Fe. Manganese: +25%Mn & -25%Mn.	Iron ore: +55% Fe & -55%Fe. Manganese: +25%Mn & -25%Mn.	Nil
7d	Any beneficiation process at mines .	No such proposal.	Nil	Nil
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	No comments on the proposal given in the modification of the mining plan.	There is no mineral conservation problems in the mine.	Nil

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No top soil generation proposed in the modification of approved scheme of mining.	No top soil was generated from the mine during the year 2016-17.	Nil
8b	Concurrent use or storage of topsoil	No such proposal.	No top soil gerenated from the mine during the year 2016-17.	Nil

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	The overburden & waste materials generated was proposed for dumping in Dump-B & Dump-C as envisaged in the modification of approved scheme of mining.	During the year 2016-17, dumping was done in Dump-B & Dump-C as per the proposal.	Nil
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	The part of the overburden & waste was proposed to be back filled in mined out poretions of Chattan pit as envisaged in the modification of approved scheme of mining in the year 2016-17.	During the year 2016-17, the backfilling for part of Chattan pit was undertaken.	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	Phased restoration was not proposed. However, phsed reclamation for Chattan pit was proposed during the year 2016-17.	The portion of mined out areas of the Chattan pit was back filled.	Nil

8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	Status of existing plantation has not been given in the approved document. However, 6000 nos. of planmtation was proposed in the bacfilled area of Chattan pit in the year 2016-17.	During the year 26000 nos. of saplings were planted within the lease area.	Nil
8g	Survival rate	The plantation of 6000 saplings were peoposed on the backfilled area & survival rate of plantation has not been furnished in the approved document.	The survival rate of plantation is about 85% during the year 2016-17.	Nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling was proposed on the haul road was envisaged in the modification of the approved scheme of mining.	Water sprinkling was a regular practice in the mine as found during the field visit of the area.	Nil
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	No such specific proposal.	The austhetic beauty of the mine was enhanced by reclamation of the mined out areas and huge planation within & out side the lease area.	Nil

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks

9a	Status of submission of Monthly and Annual returns	The party has to submit the monthly returns in F-1, F-2 & annual returns in H-1 & H-2 as the mine for production of iron ore & manganese.	The party has submitted all the monthly & annual returns in the prescribed forms during the year 2016-17.	Nil
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status opf mining engineer, geologist & mine manager have been furnished in the annual return submitted for the year 2016-17.	As the mine fall under category -A(FM), full time mining engineer, geologist & mine managers were employed in the mine.	Nil
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	As per the annual return 2016-17, an extent of 57.266ha of area has been covered by current opencast working, an extent of 9.640ha has been utilised for waste disposal, an extent of 4.758ha occupied by plant,buidlings etc., and an extent of 11.560ha has been utilised for green belt & mineral storage.	The land use status furnished in the annual return 2016-17 is found to be in order.	The land use status furnished in the annual return 2016-17 is found to be in order.

9d	Scrutiny of Annual return on afforestation	During the year 2016-17, 26000 nos. of saplings with in the lease area.	The status of plantation furnished in the annual return is in order.	Nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral rejects generation was reported during the year 2016-17 as per the annual return.	The mineral rejects/low grade generated has been processed through dry screening to make them salable.	Nil
9f	Scrutiny of Annual return on ROM stock and/or graded ore	During the year 2016-17, 1089416.100 tonnes of iron ore & 8626.540 tonnes of manganese was produced as indicated in the above annual return.	The production figures furnished in the annual returns are verified & found to be correct.	Nil

9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	The grade wise ex-mine price for iron ore indicated in the annual return is as given below: (i) Grade (Lumps): 55-58% Fe (Rs. 1000/-), 58-60%Fe (Rs.1000/-), 60-62%Fe (Rs.1039.75), 62-65% Fe (Rs.1014.39) (ii) Grade (Fines): 55-58%Fe (Rs.1600.22), 60-62%Fe (Rs. 948.00) & 62-65% Fe (Rs.951.91). The cost of production for iron ore is mentioned to be Rs. 663.89. Grade wise ex-mine price for manganese is as given below:- 25-35%Mn.(Rs. 8536.92), 35-46%Mn(Rs. 12807.80), 46% & above (Rs. 12812.51).	The ex-mine price & cost of production furnished in the annual return is found to be in order.	Nil
9h	Scrutiny of Annual return on fixed assets	The total value of the fixed assets at the end of the year 2016-17 is mentioned to be for Rs. 229211410.	The same was available for verification during the inspection.	Nil

9k	Scrutiny of Annual return on mining machineries	The mining machineries like hydraulic excavators 1.2cum/1.6cum/ 1.9cum/2.5cum (8nos.), loader 2.0cum (4 nos.), Tipper 20 tonner (23 nos.), Dozer160HP (1no.), rock breakers (3 nos.) water tanker 12000ltrs(2 nos.),Mobile crusher 150tph (1set), Screen plant 250tph/150tph (3 nos.) etc. are given in the annual return submitted for the year 2016-17.	The deployment status of the mining machineries & other machineries, equipments furnished in the annual return are appears to be correct.	Nil

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(1)	21/07/2017		MCDR17 Rule 11(1	21/07/2017	

Date :

(**SHRI G.C. SETHI**)

Indian Bureau of Mines