

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-5/BBS

Mine code : 11ORI19006

- (i) Name of the Inspecting : SRM) SHRI SUDIP RANJAN MAZUMDAR
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : Shri S.S.Mishra, Mines Manager
Official with
Designation
- (iv) Date of Inspection : 30/07/2019
- (v) Prev.inspection date : 02/08/2018

PART-I : GENERAL INFORMATION

1. (a) Mine Name : SARUABIL
- (b) Registration NO. : IBM/4197/2011
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : ORISSA
District : JAJPUR
Village : SARUABIL
Taluka : JAJPUR SADAR SUBDIV.
Post office : JAJPUR ROAD
Pin Code : 755047
FAX No. : 033-22878663
E-mail : sjain@misrilalljaingroup.co
Phone : 06726 - 268773(O), 268774(I)
- (f) Police Station : Jajpur
- (g) First opening date : 15/05/1954
- (h) Weekly day of rest : SUN
2. Address for : SARUABIL CHROMITE MINES
correspondance : VILL-SARUABIL
PO-JAJPUR ROAD
3. (a) Lease Number : ORI0235
- (b) Lease area : 246.86
- (c) Period of lease :
- (d) Date of Expiry : 31/03/2020
4. Mineral worked : CHROMITE Main

5. Name and Address of the

Lessee : M/S Misrilall Mines Ltd
 Post: J.K.Road JAJPUR
 ORISSA
 Phone:06726 - 68773 (O) , 68774 (R)
 FAX :

Owner : Sri Shiv Kumar Jain, Managing Director
 Mineral House 27A, CAMAC
 Street Kolkata-700016
 KOLKATA WEST BENGAL
 Phone:
 FAX : 033-22878663

Agent : SHRI U K SINHA
 HIG-42 JAYDEV BIHAR
 BHUBANESWAR JAJPUR ORISSA
 Phone: 9238456001
 FAX :

Mining Engineer
 Name : SHRI RUDRA MOHAN NAYAK, Full Time
 Qualification : AMIE
 Appointment/ : 05/05/2011
 Termination date

Geologist
 Name : ANIL KUMAR PRADHAN, Full Time
 Qualification : MSC Geology
 Appointment/ : 12/12/2018
 Termination date

Manager
 Name : SHRI SUDHANSU SEKHAR MISHRA
 Qualification : BE Mining Engg.
 Appointment/ : 01/06/2015
 Termination date

6. Date of approval of Mining Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	22/10/2000
		Mining Scheme rule 12 MCDR1988	22/10/2001
		Mining Scheme rule 12 MCDR1988	21/09/2005
		Modif.approved Mining Scheme	28/08/2007
		Mining Scheme rule 12 MCDR1988	31/05/2010
		Renewal under rule 24 MCR1960	15/04/2015
		MP modif under 17(3) MCR 2016	18/05/2018
		FMCP under 23C(1)	07/09/2018

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Proposal on 2018-19: 44 no of bore holes	In 2018-19, 44 no of bore holes have been drilled.	In 2018-19, 44 no of bore holes have been drilled.
1b	Exploration over lease area for geological axis 1 or 2	To explore the existing ore body at depth and remaining unexplored part of the M.L area at 200m interval to know occurrence of chromite at depth, if any, in a conclusive manner in entire lease area.	As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.	As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified	Exploration Agency: M/s SPS Geomining Solutions Pvt. Ltd. Expenditure: Rs. 141.49 Lakh	Exploration Agency: M/s SPS Geomining Solutions Pvt. Ltd. Expenditure: Rs. 141.49 Lakh
1d	Balance area to be explored to bring Geological axis in 1 or 2	To explore the existing ore body at depth and remaining unexplored part of the M.L area at 200m interval to know occurrence of chromite at depth, if any, in a conclusive manner in entire lease area.	As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.	As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.

1e	Balance reserve as on 01/04/20	Reserve as on 01.04.2019: 4113000MT Resource as on 01.04.2019: 6091000MT	Production during 2018-19: 207000MT Reserve as on 01.04.2019: 4113000MT Resource as on 01.04.2019: 6091000MT	Production during 2018-19: 207000MT Reserve as on 01.04.2019: 4113000MT Resource as on 01.04.2019: 6091000MT
1f	General remarks of inspecting officers on geology, exploration etc	Proposal on 2018-19: 44 no of bore holes. To explore the existing ore body at depth and remaining unexplored part of the M.L area at 200m interval to know occurrence of chromite at depth, if any, in a conclusive manner in entire lease area.	In 2018-19, 44 no of bore holes have been drilled. As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.	In 2018-19, 44 no of bore holes have been drilled. As on 01.04.2019, area explored under G1 level of UNFC is 56.801 Ha and 190.057 Ha in G2 level of UNFC.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Proposal in 2018-19: Q-B = 70W to 725W, 484S to 835S Q-C= 70W to W775, 835S to 1440S Q-D = 240E to 493E, 1338S to 1545S	Actual work in 2018-19: Q-B = 70W to 725W, 484S to 835S Q-C= 70W to W775, 835S to 1440S Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal.	Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in OB and mineral proposed. No top soil proposed	Separate benches in OB and mineral maintained. There was nil generation of top soil.	Separate benches in OB and mineral maintained. There was nil generation of top soil.
2c	Stripping ratio or ore to OB ratio	1.5 t/m ³	1:6.8 t/m ³	1:6.8 t/m ³
2d	Quantity of topsoil generation in m ³	Not Proposed	Nil	Nil
2e	Quantity of overburden generation in m ³	Proposal for overburden generation in 2018-19 is 2505500 cum	Overburden generated in 2018-19 is 1427967.582 cum. Proposed OB generation was proportional to ROM production proposal of 500140MTPA. But, EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, the overburden generation is less than the proposal.	Overburden generated in 2018-19 is 1427967.582 cum. Proposed OB generation was proportional to ROM production proposal of 500140MTPA. But, EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, the overburden generation is less than the proposal.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Quarries wise proposal for development in 2018-19: Q-B = 70W to 725W, 484S to 835S Q-C= 70W to W775, 835S to 1440S Q-D = 240E to 493E, 1338S to 1545S Proposal for overburden generation in 2018-19 is 2505500 cum	Actual development area in 2018-19: Q-B = 70W to 725W, 484S to 835S Q-C= 70W to W775, 835S to 1440S Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal. Overburden generated in 2018-19 is 1427967.582 cum. Proposed OB generation was proportional to ROM production proposal of 500140MTPA. But, EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, the overburden generation is less than the proposal.	Actual development area in 2018-19: Q-B = 70W to 725W, 484S to 835S Q-C= 70W to W775, 835S to 1440S Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal. Overburden generated in 2018-19 is 1427967.582 cum. Proposed OB generation was proportional to ROM production proposal of 500140MTPA. But, EC and CTO Quantity obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, the overburden generation is less than the proposal.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	3 numbers of quarries have been proposed for development in 2018-19, namely Quarry no-B, C & D	2 numbers of quarries have been worked for the production namely Quarry no- B, C. Quarry D was not operated in 2018-19. Violation has been issued for non-operating Quarry-D as per proposal.	2 numbers of quarries have been worked for the production namely Quarry no- B, C. Quarry D was not operated in 2018-19. Violation has been issued for non-operating Quarry-D as per proposal.

3b	Quantity of ROM mineral production proposed	500140 MT	207000 MT.	EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, production is less than proposal.
3c	Recovery of sailable/usable mineral from ROM production	463365 MT	207000 MT	EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Hence, production is less than proposal.
3d	Quantity of mineral reject generation	36775 MT	Nil. In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr2O3 %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.	In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr2O3 %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.

- 3e Grade of mineral + 10 to (-)
rejects 40% Cr₂O₃
generation and
threshold value
declared.
- In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.
- In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.
- 3f Quantity of sub 36775 MT
grade mineral
generation.
- Nil. In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.
- In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of mineral reject was nil.

3g	Grade of sub grade mineral generation	+ 10 to (-) 40% Cr ₂ O ₃	<p>In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of subgrade mineral was nil.</p>	<p>In 2018-19, the ROM production quantity proposal was 500140MT in which production proposal of Mineral reject (+10-40% Cr₂O₃ %) was 36775 MT only. EC and CTO Quantity for ROM obtained is 350000MTPA. CTO obtained on 03.12.2018. Actual ROM production in 2018-19 was only 207000 MT. Hence due to less production and development, the proportionate production of subgrade mineral was nil.</p>
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized	Mechanized	Mechanized

- 3i Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects. After blending of mineral rejects with ore for commercial use if there are excess of mineral rejects of +10-40% Cr2O3 will be upgraded in COB plant of lessee situated in M.L area. Capacity 20tph, ROM feed size (-150mm) of grade 30-34% Cr2O3 to fed. Expected recovery of product: 54 to 56% of size -1 mm and grade 50to 54% Cr2O3. Beneficiation plant was not in operation as mineral reject generation was nil. Beneficiation plant was not in operation as mineral reject generation was nil.
- 3j Provision of drilling and blasting in mineral benches Not proposed as the entire ore will be excavated directly due to powdery nature of ore Nil. The ore is directly excavated due to its friable nature. Nil. The ore is directly excavated due to its friable nature.
- 3k Provision of mining machineries in mineral benches Jack Hammer Drill: 01; DTH no, DTH Drill: 02 nos, Drill: 02, Air Compressor: 01 no; Excavator (1.7cum): 04 nos, (4.5cum) 02, (3.1cum) 02 nos, (2.5cum) 02 nos (1.7cum) 01 no etc. Jack Hammer Drill: 01 no, DTH Drill: 02 nos, Air Compressor: 01 no; Excavator (1.7cum): 04 nos, (1cum): 01 no etc. Jack Hammer Drill: 01 no, DTH Drill: 02 nos, Air Compressor: 01 no; Excavator (1.7cum): 04 nos, (1cum): 01 no etc.

3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height and width has been proposed at 8m and 14 m respectively.	It has been observed during inspection that bench height and width has not been maintained in Quarry No-B at location between coordinates W500 to W600 & S700 to S600 . Violation has been issued for non-compliance.	It has been observed during inspection that bench height and width has not been maintained in Quarry No-B at location between coordinates W500 to W600 & S700 to S600 . Violation has been issued for non-compliance.
3m	Total area covered under excavation/pits	Area under excavation at the end of plan period will be 53.287 Ha.	Area under excavation at the end of 2018-19 is 51.986 Ha.	Data as furnished in annual return for 2018-19.
3n	Ore to OB ratio for the pit/mine during the year.	1.5 t/m3	1:6.8 t/m3	1:6.8 t/m3
3o	Total area put in use under different heads at the end of year	At the end of plan period: Area under excavation: 53.287ha Overburden Dump: 50.466ha Mineral Storage: 5.457ha Infrastructure : 24.50ha Road: 5.500 Tailing Pond: 0.462ha ETP: 0.560ha COB Plant: 1.850ha Magazine: 0.250ha Nickel-ferrous Dump: 2.824ha Waste filled level area: 28.348ha	At the end of 2018-19: Area under excavation: 51.986ha Overburden Dump: 44.316ha Mineral Storage: 5.457ha Infrastructure: 24.50ha Road: 5.500 Tailing Pond: 0.462ha ETP: 0.560ha COB Plant: 1.850ha Magazine: 0.250ha Nickel-ferrous Dump: 2.824ha Waste filled level area: 28.348ha	At the end of 2018-19: Area under excavation: 51.986ha Overburden Dump: 44.316ha Mineral Storage: 5.457ha Infrastructure: 24.50ha Road: 5.500 Tailing Pond: 0.462ha

3p	Production of ROM mineral during the last five year period as applicable	2014-15- 349999.2 MT 2015-16- 349999.85 MT 2016-17- 349999.85 MT 2017-18- 350000 MT 2018-19- 500140 MT	2014-15- Nil 2015-16- Nil 2016-17- 135650.00 MT 2017-18- 135950 MT 2018-19- 207000 MT	2014-15- Nil 2015-16- Nil 2016-17- 135650.00 MT 2017-18- 135950 MT 2018-19- 207000 MT
3q	General remarks of inspecting officers on method of mining etc.	Three numbers of quarries have been proposed for development in 2018-19, namely Quarry No-B, C & D. ROM production quantity for 2018-19 was 500140 MT. After blending of mineral rejects with ore for commercial use if there are excess of mineral rejects of +10-40% Cr2O3 will be upgraded in COB plant of lessee situated in M.L area. Capacity 20tph, ROM feed size (-150mm) of grade 30-34% Cr2O3 to fed. Expected recovery of product: 54 to 56% of size -1 mm and grade 50to 54% Cr2O3	Two numbers of quarries have been worked for the production namely Quarry No- B, C. Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal. ROM production in 2018-19 was 207000 MT as EC and CTO Quantity for ROM obtained is 350000MTPA and CTO obtained on 03.12.2018. Hence, ROM production and OB generation was less than proposal and mineral reject generation was nil. Beneficiation plant was not in operation as mineral reject generation was nil.	Two numbers of quarries have been worked for the production namely Quarry No- B, C. Quarry D was not operated in 2018-19. Violation has been issued for non-operating quarry-d as per proposal. ROM production in 2018-19 was 207000 MT as EC and CTO Quantity for ROM obtained is 350000MTPA and CTO obtained on 03.12.2018. Hence, ROM production and OB generation was less than proposal and mineral reject generation was nil. Beneficiation plant was not in operation as mineral reject generation was 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 generation of top soil. The O.B shall be kept on Dump No 6	No generation of top soil. Overburden material has been dumped in Dump No 6.	No generation of top soil. Overburden material has been dumped in Dump No 6.
4b	Location of topsoil, OB and mineral reject dumps	Top Soil: No Proposal OB: Dump-6, 1002S- 1885S, 120E- 606W Mineral Reject: No Proposal	Top Soil: NA OB: Dump-6, 1002S- 1885S, 120E- 606W Mineral Reject: NA	Top Soil: NA OB: Dump-6, 1002S- 1885S, 120E- 606W Mineral Reject: NA
4c	Number of dumps within lease area and outside of lease area	There are 6 nos of waste dumps within lease hold. No dump is outside the lease hold area.	There are 6 nos of waste dumps within lease hold. No dump is outside the lease hold area.	There are 6 nos of waste dumps within lease hold. No dump is outside the lease hold area.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	All the waste dumps are outside the Ultimate pit limit. It has been proposed in 2018-19 that three small nickel-ferrous dumps ND-A, ND-B & ND-E will be shifted to one large nickel ferrous dump namely ND-C & D.	All the waste dumps are outside the Ultimate pit limit. It has been observed during inspection that shifting of three small nickel-ferrous dumps ND-A, ND-B & ND-E to one large nickel ferrous dump namely ND-C & D has not been done. Violation has been issued under rule 11 (1) of MCDR 2017.	All the waste dumps are outside the Ultimate pit limit. It has been observed during inspection that shifting of three small nickel-ferrous dumps ND-A, ND-B & ND-E to one large nickel ferrous dump namely ND-C & D has not been done. Violation has been issued under rule 11 (1) of MCDR 2017.
4e	Number of active and alive dumps.	One active dump i.e. - Dump No 6.	One active dump i.e. - Dump No 6.	One active dump i.e. - Dump No 6.
4f	Number of dead dumps.	Five numbers of dead dumps	Five numbers of dead dumps	Five numbers of dead dumps

4g	Number of dumps established.	Five numbers of dump are stabilized.	Five numbers of dump are stabilized.	Five numbers of dump are stabilized.
4h	Whether Retaining wall or garland drain all along dumps are there.	In 2018-19, construction of retaining wall have been proposed around Waste dump (WD-6), Waste dump (WD-5), Ore Stack-2, Ore Stack-3 and Nickel-ferrous dump (ND-C & D)	Retaining wall has been constructed around Waste dump (WD-6), Waste dump (WD-5) as per proposal and around 248 m around Waste dump (WD-2). However, it has been observed during inspection that retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.	Retaining wall has been constructed around Waste dump (WD-6), Waste dump (WD-5) as per proposal and around 248 m around Waste dump (WD-2). However, it has been observed during inspection that retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.
4i	Length of Retaining wall or garland drain all along dumps	In 2018-19, proposal for construction of retaining wall was 2320 m and garland drain of 1200m.	In 2018-19, around 2025m of retaining wall and 1490m of garland drain have been constructed. It has been observed during inspection that retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.	In 2018-19, around 2025m of retaining wall and 1490m of garland drain have been constructed. It has been observed during inspection that retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.

4j	Number of settling ponds	In 2018-19, proposal was to construct one no of settling tank of dimension (20mx10mx5m) and five nos of settling pond of dimension (10m×5m×3m)	In 2018-19, one no of settling tank of dimension (20mx10mx5m) and four nos of settling pond of dimension (10m×5m×3m) have been constucted. It has been observed during inspection that one no of settling tank of dimension (10m x 5m x 3m) has not been constructed and violation has been issued for non-compliance under rule 11(1) of MCDR 2017.	In 2018-19, one no of settling tank of dimension (20mx10mx5m) and four nos of settling pond of dimension (10m×5m×3m) have been constucted. It has been observed during inspection that one no of settling tank of dimension (10m x 5m x 3m) has not been constructed and violation has been issued for non-compliance under rule 11(1) of MCDR 2017.
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4k	Specific comments of inspecting officer on waste dump management	It has been proposed in 2018-19 that three small nickel-ferrous dumps ND-A, ND-B & ND-E will be shifted to one large nickel ferrous dump namely ND-C & D. It has been proposed in 2018-19 to construct five (05) no of settling tank of dimension (10m x 5m x 3m). It has been proposed in 2018-19 to construct retaining wall around Ore stack-2, Ore stack-3 and Nickel-ferrous dump (ND-C&D) of length 220m, 250m and 350m respectively.	It has been observed during inspection that shifting of three small nickel-ferrous dumps ND-A, ND-B & ND-E to one large nickel ferrous dump namely ND-C & D has not been done. It has been observed during inspection that one no of settling tank of dimension (10m x 5m x 3m) has not been constructed. Retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance.	It has been observed during inspection that shifting of three small nickel-ferrous dumps ND-A, ND-B & ND-E to one large nickel ferrous dump namely ND-C & D has not been done. It has been observed during inspection that one no of settling tank of dimension (10m x 5m x 3m) has not been constructed. Retaining wall has not been constructed around ore stack-2 & ore Stack-3 and partly of around 212m has been constructed around Nickel-ferrous dump (ND-C&D). Violation has been issued for non-compliance.
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Solid Waste Management - Backfilling:

Sl.No.	Item	Proposals	Actual work	Remarks
5a	Status of part or full extraction of mineral from mined out area before starting backfilling.	Not Proposed	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.
5b	Area under backfilling of mined out area	Not Proposed	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Not Proposed	Nil.	Nil.
5d	Total area fully reclaimed and rehabilitated	Not Proposed	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.	Nil. The ore body continues at depth and hence the pits are not matured for reclamation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	There is no proposal for backfilling over the mines out quarry.	The ore body continues at depth and hence the pits are not matured for reclamation.	The ore body continues at depth and hence the pits are not matured for reclamation.

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).	The holder of mining lease shall submit to the competent authority a yearly report as per the format specified by the Indian Bureau of Mines, before 1st day of July every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plan, and if there is any deviation, reasons thereof:	As per rule 26 (2) of MCDR' 2017, the yearly report on extent of protective and rehabilitation works carried out as envisaged in the approved mine closure plan for the year 2018-19 has not been submitted to the competent authority till date. Violation has been issued to the lessee for non-compliance of rule 26(2) of MCDR 2017.	Violation has been issued to the lessee for non-compliance of rule 26(2) of MCDR 2017.

6b	Area available for rehabilitation (ha) .	In 2018-19, around 6.058 Ha area has been proposed for rehabilitation by plantation (WD-5: 1.785 Ha; ND-C & D: 2.300 Ha, Ore stack yard-3, 4 & 5: 1.450 Ha, ND-A, B&E after shifting of nickel-ferrous material: 0.524 Ha, WD-2: Gap Filling)	In 2018-19, around 3.0 Ha area has been rehabilitated by plantation against proposal (WD-2: Gap Filling; ND-C & D: 0.5 Ha; Ore stack yard-3, 4 & 5: 0.5 Ha, ND-A, B&E after shifting of nickel-ferrous material: Nil). Violation has been issued for non - compliance under rule 11(1) of MCDR 2017.	In 2018-19, around 3.0 Ha area has been rehabilitated by plantation against proposal (WD-2: Gap Filling; ND-C & D: 0.5 Ha; Ore stack yard-3, 4 & 5: 0.5 Ha, ND-A, B&E after shifting of nickel-ferrous material: Nil). Violation has been issued for non - compliance under rule 11(1) of MCDR 2017.
6c	afforestation done (ha).	6.05 Ha	3.05 Ha	Violation has been issued for non - compliance under rule 11(1) of MCDR 2017.
6d	No. of saplings planted during the year	In 2018-19, around 20685 nos of saplings were proposed to be planted.	In 2018-19, around 15567 nos of saplings have been planted. Plantation has not been done as per proposal in the above locations. Violation has been issued under rule 11(1) of MCDR 2017.	In 2018-19, around 15567 nos of saplings have been planted. Plantation has not been done as per proposal in the above locations. Violation has been issued under rule 11(1) of MCDR 2017.
6e	Cumulative no .of plants	86000 nos of saplings have been proposed for dump management	89910 nos of saplings have been planted for dump management.	89910 nos of saplings have been planted for dump management.
6f	Any other method of rehabilitation	Not Proposed	Nil	Nil
6g	Cost incurred on watch and care during the year	4.0 Lakh	6.66 Lakhs	Nil

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	Not Proposed	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Not Proposed	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.
6j	Compliance on reclamation and rehabilitation by backfilling (iii) Afforestation on backfilled area	Not Proposed	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.	Nil. The ore body continues in depth and pits are not matured for reclamation and rehabilitation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	Not Proposed	Nil	Nil
6l	Compliance on reclamation and rehabilitation by backfilling (v) any other specific means.	Not Proposed	Nil	Nil
6m	Compliance of rehabilitation of waste land within lease (i) afforestation	Not Proposed	Nil	Nil
6n	Compliance of rehabilitation of waste land within lease (ii) Area rehabilitation (ha)	Not Proposed	Nil	Nil

6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Not Proposed	Nil	Nil
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, water and noise to be monitored 8 hourly, twice in a week and 4 weeks in a season and 4 seasons in a year in day time.	Air, water and noise is monitored 8 hourly, twice in a week and 4 weeks in a season and 4 seasons in a year in day time.	Air, water and noise is monitored 8 hourly, twice in a week and 4 weeks in a season and 4 seasons in a year in day time.

6g	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	A yearly report to be submitted as per the format specified by the Indian Bureau of Mines, before 1st day of July every year setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plan. Three small nickel-ferrous dumps ND-A, ND-B & ND-E will be shifted to one large nickel ferrous dump namely ND-C & D. It is proposed in 2018-19 to shift ore from ore stack yard no- 3, 4 & 5 and plantation to be done in the area after shifting of ore.	Violation has been issued to the lessee for non-compliance of rule 26(2) of MCDR 2017. It has been observed during inspection that shifting of three small nickel-ferrous dumps ND-A, ND-B & ND-E to one large nickel ferrous dump namely ND-C & D has not been done. It has been observed during inspection that shifting of ore has not been done from stack yard 3 and 5. However, shifting of ore partly has been done from ore stack yard no.05 and partly the area has been planted with saplings.	Violation has been issued for non-compliance unbderr rule 11(1) of MCDR 2017.
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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise mineral to be dispatched.	Grade wise mineral dispatched.	Grade wise mineral dispatched.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical	Mechanical	Mechanical
7c	Different grade of mineral sorted out at mines.	+52% Cr2O3. +40 to -52% Cr2O3 and +10 to -40% Cr2O3	+52% Cr2O3. +40 to -52% Cr2O3 and +10 to -40% Cr2O3	+52% Cr2O3. +40 to -52% Cr2O3 and +10 to -40% Cr2O3
7d	Any beneficiation process at mines .	If there will be excess of mineral rejects of +10-40% Cr2O3 it will be upgraded in the COB Plant i.e., within the Lease Area.	There was no generation of mineral rejects. Hence the COB Plant was not operated.	There was no generation of mineral rejects. Hence the COB Plant was not operated.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Grade wise mineral to be dispatched. If there will be excess of mineral rejects of +10-40% Cr2O3 it will be upgraded in the COB Plant i.e., within the Lease Area.	Grade wise mineral is being dispatched. There was no generation of mineral rejects. Hence the COB Plant was not operated.	Grade wise mineral is being dispatched. There was no generation of mineral rejects. Hence the COB Plant was not operated.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	In 2018-19, there is no proposal of top soil generation	In 2018-19, no top soil has been generated.	In 2018-19, no top soil has been generated.
8b	Concurrent use or storage of topsoil	Not Proposed	Nil	Nil

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumps for O.B. and Nickel Dump.	Separate dumps for O.B. and Nickel Dump maintained.	Separate dumps for O.B. and Nickel Dump maintained.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Not Proposed	Nil	Nil
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	In 2018-19, around 6.058 Ha area has been proposed for rehabilitation by plantation (WD-5: 1.785 Ha; ND-C & D: 2.300 Ha, Ore stack yard-3, 4 & 5: 1.450 Ha, ND-A, B&E after shifting of nickel-ferrous material: 0.524 Ha, WD-2: Gap Filling)	In 2018-19, around 3.0 Ha area has been rehabilitated by plantation against proposal (WD-2: Gap Filling; ND-C & D: 0.5 Ha; Ore stack yard-3, 4 & 5: 0.5 Ha, ND-A, B&E after shifting of nickel-ferrous material: Nil). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.	In 2018-19, around 3.0 Ha area has been rehabilitated by plantation against proposal (WD-2: Gap Filling; ND-C & D: 0.5 Ha; Ore stack yard-3, 4 & 5: 0.5 Ha, ND-A, B&E after shifting of nickel-ferrous material: Nil). Violation has been issued for non-compliance under rule 11(1) of MCDR 2017.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No. of saplings proposed to be planted during the year 2018-19 was 20685 Nos.	No. of saplings planted during the year 2018-19 was 15567 Nos.	Nil
8g	Survival rate	Not Specified	95%	Data as furnished in annual return for 2018-19.
8h	Water sprinkling on roads to control airborne dust	Regular water sprinkling on the dust prone areas like haul road, loading and unloading sites etc.	Regular water sprinkling is being done on the dust prone areas like haul road, loading and unloading sites etc.	Regular water sprinkling is being done on the dust prone areas like haul road, loading and unloading sites etc.

8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	Not Specified	Aesthetic beauty in and around mines is being maintained.	Aesthetic beauty in and around mines is being maintained.
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Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly returns and annual return for 2018-19 has been submitted.	Monthly returns and annual return for 2018-19 has been submitted.	Monthly returns and annual return for 2018-19 has been submitted.
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information of mining engineer, geologist and manager have been furnished in annual return for 2018-19.	Information of mining engineer, geologist and manager have been furnished in annual return for 2018-19.	Mining Engineer, Geologist and Manager have been appointed.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under excavation: 51.986ha; reclaimed/rehabilitated: 11.48 Ha,, Ore stacking yard: 4.457 Ha, Nickeliferous dump: 2.824 Ha etc.	Area under excavation: 51.986ha; reclaimed/rehabilitated: 11.48 Ha,, Ore stacking yard: 4.457 Ha, Nickeliferous dump: 2.824 Ha etc.	Area under excavation: 51.986ha; reclaimed/rehabilitated: 11.48 Ha,, Ore stacking yard: 4.457 Ha, Nickeliferous dump: 2.824 Ha etc.
9d	Scrutiny of Annual return on afforestation	15567 nos of saplings have been planted in 2018-19	15567 nos of saplings have been planted in 2018-19	Data furnished in annual return for 2018-19.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	There is nil generation of mineral reject generation.	There is nil generation of mineral reject generation.	There is nil generation of mineral reject generation.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	Closing Stock of ROM is Nil	Closing Stock of ROM is Nil	Closing Stock of ROM is Nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price of fines below 40% Cr2O3 is Rs 1852.00 per tonne. Ex-mine price of fines 40% to below 52% Cr2O3 is Rs 10260.00 per tonne. Ex-mine price of fines 52% Cr2O3 and above is Rs 1269100 per tonne.	Ex-mine price of fines below 40% Cr2O3 is Rs 1852.00 per tonne. Ex-mine price of fines 40% to below 52% Cr2O3 is Rs 10260.00 per tonne. Ex-mine price of fines 52% Cr2O3 and above is Rs 1269100 per tonne.	Ex-mine price of fines below 40% Cr2O3 is Rs 1852.00 per tonne. Ex-mine price of fines 40% to below 52% Cr2O3 is Rs 10260.00 per tonne. Ex-mine price of fines 52% Cr2O3 and above is Rs 1269100 per tonne.
9h	Scrutiny of Annual return on fixed assets	Value of fixed assets is Rs 81636226	Value of fixed assets is Rs 81636226	Data as furnished in annual return for 2018-19
9k	Scrutiny of Annual return on mining machineries	Backhoe (1.7 cum capacity): 4 nos; Backhoe (1.0 cum capacity): 1 no; Dozer : 3 nostipper (6cum/16cum/18 cum): 19 nos; etc	Backhoe (1.7 cum capacity): 4 nos; Backhoe (1.0 cum capacity): 1 no; Dozer : 3 nostipper (6cum/16cum/18 cum): 19 nos; etc	Backhoe (1.7 cum capacity): 4 nos; Backhoe (1.0 cum capacity): 1 no; Dozer : 3 nostipper (6cum/16cum/18 cum): 19 nos; etc

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

Violation observed			Show cause position		
Rule NO.	Issued on	Compliance on	Rule NO.	Issued on	Compliance on
MCDR17	Rule 11(1)	14/08/2019			
MCDR17	Rule 26(2)	14/08/2019			

Date :

Sudip Ranjan Mazumdar
18/11/19
(SHRI SUDIP RANJAN MAZUMDAR)

Indian Bureau of Mines