

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON/KJR/MCDR-48/BBS

Mine code : 30ORI08072

- (i) Name of the Inspecting : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Shri S.N.Kamballi, Vice president and authorized sign
Official with
Designation
- (iv) Date of Inspection : 17/04/2018
- (v) Prev.inspection date : 09/03/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **ROIDA-I**
- (b) **Registration NO.** :
- (c) Category : A Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : TANTO
- Taluka : BARBIL
- Post office : BHADRASAHI
- Pin Code : 758035
- FAX No. :
- E-mail :
- Phone : 06767-275225
- (f) Police Station :
- (g) First opening date : 23/01/1953
- (h) Weekly day of rest : SUN
2. Address for : ROIDA 1 IRON ORE MINE, BARBIL, ORISSA-758035
correspondance
3. (a) Lease Number : ORI0068
- (b) Lease area : 104.68
- (c) Period of lease : 20
- (d) Date of Expiry : 22/01/2003
4. Mineral worked : IRON ORE Main

5. Name and Address of the

Lessee : MIDEAST INTEGRATED STEELS LTD
 MESCO AIRLINES LTD, C/O:
 EAST AIR HANGER, BIJU
 PATTNAIK AIRPORT
 BHUBANESWAR KHURDA ORISSA
 Phone: 0674-2534822
 FAX :

Owner : MIDEAST INTEGRATED STEEL LTD.
 H-1 ZARUDDPUR COMMUNITY
 CENTRE KAILASH COLONY
 DELHI DELHI
 Phone: 91-11-24642687
 FAX : 91-11-24651099

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	20/02/2004
Plan/Scheme of Mining		Modif.of approved Mining Plan	11/09/2007
		Mining Scheme rule 12 MCDR1988	04/03/2009
		Modif.approved Mining Scheme	14/10/2010
		Modif.approved Mining Scheme	05/02/2015
		Modif.approved Mining Scheme	27/07/2016

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	For reporting year i.e. 2017-18: 28 BH	06 BH were completed.	Less drilling due to suspension of mining operation w.e.f. 31/12/2017 by DDM, Joda vide letter dated 01/01/2018 and non-diversion of forest land.
1b	Exploration over lease area for geological axis 1 or 2	A total of 52 BH have been proposed during 2016-17 to 2017-18 to explore lease area under G1/G2 level of exploration.	11 bh have been completed during 2016-17 to 2017-18.	Less drilling due to suspension of mining operation w.e.f. 31/12/2017 by by DDM, Joda vide letter dated 01/01/2018 and non-diversion of forest land.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal.	GEO Exploration India, Keonjhar, Odisha India.	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved document dated 27/07/2016 an area of 36.641 Ha to be explore.	As per approved document dated 14/06/2018 an area of 32.978 Ha is yet to explore.	NIL.
1e	Balance reserve as on 01/04/20	As per approved document dated 27/07/2016, the position of reserve and resource was 60.565 and 16.983 million tonnes respectively.	The position of reserve and resource as on 01/04/2018 as per approved document dated 14/06/2018 is 59.86 and 2.50 million tonnes respectively.	NIL.

1f	General remarks of inspecting officers on geology, exploration etc	Exploration has been proposed for entire lease area to explore under G1/G2 level of exploration.	Geologically the Iron Ore deposit of the lease area is moderate to high grade. Proposal of exploration has been given for entire lease area. However, due to non-diversion of the forestland and suspension of mining operation exploration for the year 2017-18 could not be completed.	NIL.
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Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t. lease area	Quarry 4 and 8: N 2437056-N 2437979, E 330626- E 331264	The development has been carried out as per proposal. However, development as proposed could not be achieved due to suspension of mining operation w.e.f. 01.01.2018.	NIL.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	No proposal of top soil generation. Separate benches in OB and Ore.	Separate benches has been maintained in OB and Ore.	Mainly ore benches are observed.
2c	Stripping ratio or ore to OB ratio	1:0.15 Tonnes/CuM	1:0.073 Tonnes/CuM. The reason for deviation may be due to development as proposed could not be achieved.	Due to not obtaining EC for enhanced production i.e. 6.0 million tonnes and suspension of Mining operation. Considering conversion factor 2 tonnes/CuM for waste.
2d	Quantity of topsoil generation in m3	No proposal of top soil generation.	NIL.	NIL.

2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The development has been proposed in quarry 4 and quarry 8.	The development has been carried out as per proposal. However, development as proposed could not be completed due to suspension of mining operation w.e.f. 01.01.2018.	NIL.
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Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	Proposed in two quarries namely quarry 4 and quarry 8.	Mostly exploitation was carried out in quarry 4 only.	Due to not obtaining EC for enhanced production.
3b	Quantity of ROM mineral production proposed	6.00 million tonnes.	2.78 million tonnes.	Due to not obtaining EC for enhanced production i.e. 6.0 million tonnes and suspension of Mining operation. EC has been granted for 3.0 million tonnes.
3c	Recovery of sailable/usable mineral from ROM production	5.988 million tonnes.	2.78 million tonnes.	Due to not obtaining EC for enhanced production and suspension of Mining operation.
3d	Quantity of mineral reject generation	12001 tonnes	NIL.	Due to irregular behavior of Ore body, only salable ore was encountered.
3e	Grade of mineral rejects generation and threshold value declared.	45 to 55% Fe	No generation of MR.	NIL.
3f	Quantity of sub grade mineral generation.	NIL.	NIL.	NIL.
3g	Grade of sub grade mineral generation	NIL.	NIL.	NIL.

3h	Manual / Mechanised method adopted for segregating from ROM	Mechanised.	Mechanised.	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No proposal of beneficiation study.	NIL.	NIL.
3j	Provision of drilling and blasting in mineral benches	Drilling of the blast holes is proposed to be done by Pneumatic DTH drill of 100mm dia holes in the insitu iron zone.	As per proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Dumper and shovel combination.	Dumper and shovel combination. However, mine was under suspension on the date of inspection.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height of the benches have been proposed to 9 meters.	Height of benches has been maintained more or less as per proposal.	NIL.
3m	Total area covered under excavation/pits	As per approved document dated 27/07/2016 , an area of 38.41 Ha at the end of plan period.	28.162 as on 01/04/2018	NIL.
3n	Ore to OB ratio for the pit/mine during the year.	1:0.15 tonnes/CuM	1:0.073 Tonnes/CuM. The reason for deviation may be due to development as proposed could not be achieved.	Due to not obtaining EC for enhanced production i.e. 6.0 million tonnes and suspension of Mining operation.

3o	Total area put in use under different heads at the end of year	71.56 Ha at the ned of plan period.	55.116 as on 01/04/2018	As per approved document dated 14/06/2018
3p	Production of ROM mineral during the last five year period as applicable	2013-14:3.0 mT 2014-15:4.0 mT 2015-16:6.0 mT 2016-17: 6.0 mT 2017-18: 6.0 mT	2013-14:2.07 mT 2014-15:0.204mT 2015-16:1.66 mT 2016-17: 2.80 mT 2017-18: 2.78 mT	Less production due to not obtaining EC for enhanced production and suspension of Mining operation.
3q	General remarks of inspecting officers on method of mining etc.	Production of 6.0 million tonnes of ROM has been proposed form two quarries namely Quarry 4 and Quarry8.	Proposed production could not be achieved due to suspension of mining operation by DDM joda and not obtaining EC for enhanced production.	NIL.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	No proposal of top soil generation. Separate dumping of waste and mineral reject was envisaged.	Separate dumping of waste and mineral reject has been observed.	NIL.
4b	Location of topsoil, OB and mineral reject dumps	Waste dumping over waste dump D-1 at NE corner of the lease area.	Waste dumping was observed over waste dump D-1 at NE corner of the lease area.	NIL.
4c	Number of dumps within lease area and outside of lease area	2	2	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Proposed outside of UPL.	Outside of UPL.	NIL.
4e	Number of active and alive dumps.	01	01	NIL.

4f	Number of dead dumps.	01	01	NIL.
4g	Number of dumps established.	No proposal.	NIL.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposed.	Retaining wall of 710 mts and garland drain of 865 mts has been constructed along the tow of waste dumps.	NIL.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall and garland drain of 352 mts each has been proposed along the tow of waste dump.	Retaining wall and garland drain has been constructed along the tow of waste dump.	NIL.
4j	Number of settling ponds	No proposal for reporting year.	NIL.	NIL.
4k	Specific comments of inspecting officer on waste dump management	Dumping of waste was proposed to NE corner of lease area and provision of retaining wall and garland drain was given along the tow of waste dump.	Retaining wall and garland drain was observed along the wate dumps.	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.	No proposal.	NIL.	NIL.
5b	Area under backfilling of mined out area	No proposal.	NIL.	NIL.

5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal of top soil generation during reporting year.	NIL.	NIL.
5d	Total area fully reclaimed and rehabilitated	No proposal.	NIL.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No proposal of backfilling and reclamation.	None of the pit area was matured for reclamation and rehabilitation.	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).	As per MCDR, 2017, PMCP report to be submitted for previous year by 1st July.	Submitted for reporting year i.e. 2017-18.	NIL.
6b	Area available for rehabilitation (ha) .	No proposal for reporting year.	NIL.	NIL.
6c	afforestation done (ha).	1.0 Ha area. (mainly in safety zone, dry nala and waste dump).	(As per proposal.	NIL.
6d	No. of saplings planted during the year	As per approved document during period 2016-17 to 2017-18, a total of 1500 saplings were proposed to plant.	During period 2016-17 to 2017-18, a total of 2450 saplings were planted.	NIL.

6e	Cumulative no .of plants	As per approved document during period 2016-17 to 2017-18, a total of 1500 saplings were proposed to plant.	During period 2016-17 to 2017-18, a total of 2450 saplings were planted.	NIL.
6f	Any other method of rehabilitation	No proposal.	NIL.	NIL.
6g	Cost incurred on watch and care during the year	No proposal.	Not applicable.	NIL.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal.	NIL.	NIL.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No proposal.	NIL.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal.	NIL.	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal.	NIL.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No proposal.	NIL.	NIL.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	No proposal.	NIL.	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	No proposal.	NIL.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given for environment monitoring in core and buffer zone.	As per proposal for reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	Plantation has been proposed.	Plantation has been carried out in safety zone, dry nala and waste dump portion. No proposal of backfilling and any other method rehabilitation and reclamation.	NIL.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting proposed within lease area.	As per proposal.	NIL.
7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanical.	Mechanical.	NIL.

7c	Different grade of mineral sorted out at mines.	Iron Ore having Fe Grade from 45 to 55 %, 55% to below 58%, 58% to below 60%, 60% to below 62%, 62% to below 65%, and 65% and above.	Iron Ore having Fe Grade from 45 to 55 %, 55% to below 58%, 58% to below 60%, 60% to below 62%, 62% to below 65%, and 65% and above.	NIL.
7d	Any beneficiation process at mines .	No specific proposal of beneficiation within the lease area. However, crushing and screening was proposed.	Crushing and screening was observed.	NIL.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Proposal of separate stacking of Sub grade material for future use or blending.	MR/Sub-grade material is being stacked separately or future use or beneficiation	NIL.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No proposal of top soil generation during reporting year.	NIL.	NIL.
8b	Concurrent use or storage of topsoil	No Proposal.	NIL.	NIL.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping of Waste, Mineral reject has been proposed.	Separate dumping of Waste, Mineral reject was observed.	NIL.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal.	NIL.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	During period 2016-17 to 2017-18, afforestation was proposed along dry seasonal nala, safety zone and matured slope of waste dump.	Afforestation work was carried out along dry seasonal nala, safety zone and matured slope of waste dump.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	No specific proposal.	A total of 2450 saplings have been planted during 2016-17 to 2017-18.	NIL.
8g	Survival rate	No Proposal.	For reporting year 72%.	As per AR 2017-18.
8h	Water sprinkling on roads to control airborne dust	To control the airborne dust water sprinkling were proposed on the roads.	Water sprinkling has not been observed as the mining operations were under suspension.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	---	Aesthetic beauty of the mine was observed to moderate	Mining operations were under suspension w.e.f. 01.01.2018.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	As per rule 45 of MCDR , monthly and annual returns to be submitted.	Monthly and annual returns have been submitted for reporting year.	NIL.

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Information has been furnished about Mining Engineer, Geologist, and Manager.	Mining engineer, Geologist and Manager are appointed.	NIL.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	A total of 55.00 Ha area has been furnished.	The land use pattern is found to be in order.	NIL.
9d	Scrutiny of Annual return on afforestation	450 no.	450 no.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	Below cut off grade: NIL.	NIL.	NIL.
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock: 48616.00 tonnes.	Seems to be in order.	NIL.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: RS 638.18/tonne	Found to be in order.	NIL.
9h	Scrutiny of Annual return on fixed assets	Value of fixed asset furnished was Rs. 536545732/-	Found to be in order.	NIL.
9k	Scrutiny of Annual return on mining machineries	Shovel, dumpers, loaders, water tanker, Compressor, drill machine etc.	As per details furnished.	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(3)	10/05/2018	24/05/2018	MCDR17	Rule 24(1)	10/05/2018	26/06/2018
MCDR17	Rule 11(4)	10/05/2018	24/05/2018	MCDR17	Rule 24(1)	10/05/2018	26/06/2018
MCDR17	Rule 24(1)	10/05/2018					
MCDR17	Rule 11(3)	10/05/2018	24/05/2018				
MCDR17	Rule 11(4)	10/05/2018	24/05/2018				
MCDR17	Rule 24(1)	10/05/2018					

Date :

(DILIP JAIN)

Indian Bureau of Mines