

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

**MCDR INSPECTION REPORT**

**Bhubaneshwar regional office**

**Mine file No :** ORI/MN/SNG/MCDR-5/BBS-24.5.2K

**Mine code :** 40ORI13014

- (i) Name of the Inspecting : **DJ03** ) **DILIP JAIN**  
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine : Sri Satish Mohanty (Geologist)  
Official with  
Designation
- (iv) Date of Inspection : 26/11/2015
- (v) Prev.inspection date : 03/05/2014

**PART-I : GENERAL INFORMATION**

1. (a) **Mine Name** : **MAHULSUKHA**
- (b) **Registration NO.** :
- (c) Category : A Manual
- (d) Type of Working : Opencast
- (e) Postal address  
State : ORISSA  
District : SUNDARGARH  
Village : BHUTRA  
Taluka : BONAI  
Post office : BHUTRA  
Pin Code :  
FAX No. : 033-2325689  
E-mail :  
Phone : 033 - 2395661,09437005097
- (f) Police Station :
- (g) First opening date : 03/02/1945
- (h) Weekly day of rest : SUN
2. Address for : MAHULSUKHA MN MINES, M/S AMTC(P) LTD  
correspondance P.O.BHUTRA, DIST:SUNDERGARH  
ORISSA-770041
3. (a) Lease Number : ORI0169  
(b) Lease area : 399.84  
(c) Period of lease : 20  
(d) Date of Expiry : 24/02/2005
4. Mineral worked : MANGANESE ORE Main

## 5. Name and Address of the

Lessee : M/S A.M.T.C.(P) Ltd.  
61,Strand Road KOLKATA  
WEST BENGAL  
Phone:  
FAX :

Owner : Aryan Mining & Trading Corporation P ltd  
Sri.H.Kakad 61,STRAND ROAD  
KOLKATA WEST BENGAL  
Phone: 033-2395661  
FAX : 033-2325689

## Mining Engineer

Name : P.K.CHAKRABARTI,Full Time  
Qualification : DIPLOMA IN MINING  
Appointment/ : 17/07/2000  
Termination date

## Mining Engineer

Name : A.MANNA,Full Time  
Qualification : DIPLOMA IN MINING  
Appointment/ :  
Termination date

## Geologist

Name : P.K.MUKHERJEE,Full Time  
Qualification : M.Sc (GEOLOGY)  
Appointment/ :  
Termination date

6. Date of approval of Mining	:	Renewal under rule 22 MCR1960	25/05/2004
Plan/Scheme of Mining		Modif.of approved Mining Plan	15/02/2007
		Mining Scheme rule 12 MCDR1988	11/06/2010
		Mining Scheme rule 12 MCDR1988	26/06/2015

## PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

## Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	Proposed for the year 2014-15: 45 BH	NIL	Mine operations were in suspension w.e.f. 17.05.2014.
1b	Exploration over lease area for geological axis 1 or 2	110 BH by FY 2014-15.	Exploration proposal could not be implemented due to delay in obtaining tree felling permission. Permission was given to drill only 11 bore holes as against the proposal of 110 by the end of FY 2014-15.	Mine operation was suspended wef 17.05.2014 as per the directive of DDM, Koira.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No information.	No expenditure on exploration during 2014-15.	Mine operations were in suspension w.e.f. 17.05.2014.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Around 366.00 Ha area to be explored.	Around 366.00 Ha area to be explored.	Mine operations were in suspension w.e.f. 17.05.2014.
1e	Balance reserve as on 01/04/20	Proved Reserve (111): 425157 MT Probable Reserve (122): 219180 MT	Balance reserve as on 01/04/2015 Proved Reserve (111): 344814 MT Probable Reserve (122): 219180 MT	Depletion from 2010-11 to 2014-15 = 80,342.975 MT
1f	General remarks of inspecting officers on geology, exploration etc	The lessee has granted the lease over an area of 399.838 ha. Out of which only 39.00 Ha area is explored under G1 and G2 category.		Mine operations were in suspension w.e.f. 17.05.2014.

## Development :

Sl.No.	Item	Proposals	Actual work	Remarks
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2a	Location of development w.r.t.lease area	Nandagira Block Q-1N & Q-5Top, Rajabasa Block Q-6D Mahulsukha Block Q-1	Quarry 1N- Nandagira Block	Mine operations were in suspension w.e.f. 17.05.2014.
2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Three in Ore, six in OB	Three in Ore, six in OB	Mine operations were in suspension w.e.f. 17.05.2014.
2d	Quantity of topsoil generation in m3	No Proposal	NIL.	
2e	Quantity of overburden generation in m3	615992 m <sup>3</sup>	56852.00 m <sup>3</sup>	Mine operations were in suspension w.e.f. 17.05.2014.

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#### Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	For the year 2014-15: 04	Workd in 01 pit only.	The other pits could not be worked due to want of forest permission.
3b	Quantity of ROM mineral production proposed	84272.00 MT	1947.00 MT	Mine operations were in suspension w.e.f. 17.05.2014.
3c	Recovery of sailable/usable mineral from ROM production	75036.00 MT	1947.262 MT	Mine operations were in suspension w.e.f. 17.05.2014.
3d	Quantity of mineral reject generation	9236.00 MT	NIL.	
3e	Grade of mineral rejects generation and threshold value declared.	For the year 2014-15: Threshold Valu= +10% Mn Mineral Reject= 10 to 20% Mn.	No genration of Sub Grade / Mineral reject.	Mine operations were in suspension w.e.f. 17.05.2014.

3f	Quantity of sub grade mineral generation.	9236.00 MT	NIL.	Mine operations were in suspension w.e.f. 17.05.2014.
3g	Grade of sub grade mineral generation	For the year 2014-15: Threshold Valu= +10% Mn Mineral Reject= 10 to 20% Mn.	No generation of Sub Grade / Mineral reject.	Mine operations were in suspension w.e.f. 17.05.2014.
3h	Manual / Mechanised method adopted for segregating from ROM	Manual	Manual sorting, picking and sizing.	
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal.	Not applicable.	
3j	Provision of drilling and blasting in mineral benches	100 mm dia DTH drill to be utilized for drilling with burden 1.0 m & spacing 1.20 m	Not applicable in view of Mine was under suspension at the time of inspection.	Mine operations were in suspension w.e.f. 17.05.2014.
3k	Provision of mining machineries in mineral benches	Excavation proposed to be practised through shovel and dumper combination at benches.	Not applicable in view of Mine was under suspension at the time of inspection.	
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench Height 6 mts.	In general height seems to be of 6 mts.	Mine operations were in suspension w.e.f. 17.05.2014.
3m	Total area covered under excavation/pits	2014-15: 34.489 Ha.	Around 27.00 Ha.	Mine operations were in suspension w.e.f. 17.05.2014.

3o	Total area put in use under different heads at the end of year	2014-15: 121.757 Ha.	2014-15: 121.757 Ha.	Mine operations were in suspension w.e.f. 17.05.2014.
3p	Production of ROM mineral during the last five year period as applicable	FY 2014-15: 75036.00 MT FY 2013-14: 72150.00 MT FY 2012-13: 74880.00 MT FY 2011-12: 63336.00 MT FY 2010-11: 42822.00 MT	FY 2014-15: 1947.00 MT FY 2013-14: 17103.00 MT FY 2012-13: 10559.00 MT FY 2011-12:17118.00 MT FY 2010-11: 33614.00 MT	Proposed and actual production of Mn Ore.

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Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	The topsoil, OB and mineral rejects to be dumped separately.	The dumps of topsoil, OB and mineral rejects were observed separately.	Mine operations were in suspension w.e.f. 17.05.2014.
4b	Location of topsoil, OB and mineral reject dumps	Around 0.5 Ha area is earmarked near Quarry -7 for stacking of Top soil. Dump No. 4 of Q-1N in Nandagira Block is proposed to be extended in retreating manner at & Dump No. 7 in Rajabasa Block is proposed to be extended in retreating manner.	Not applicable as Mining operations were under suspension.	Mining operations are under suspension.
4c	Number of dumps within lease area and outside of lease area	Within Lease area=06 Outside lease area= NIL	Within Lease area=06 Outside lease area= NIL	

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Outside the UPL.	Dumps have been developed outside the UPL.	
4e	Number of active and alive dumps.	01	01	
4h	Whether Retaining wall or garland drain all along dumps are there.	Maintenance of existing retaining wall and garland drain in year 2014-15.	Retaining wall and garland drains have been constructed around the dumps.	Mine operations were in suspension w.e.f. 17.05.2014.
4i	Length of Retaining wall or garland drain all along dumps	Maintenance during 2014-15.	The 1271.14m retaining wall constructed and 350m garland drains have been de-silted.	
4j	Number of settling ponds	Maintenance of settling ponds	Settling ponds have been de-silted.	Mine operations were in suspension w.e.f. 17.05.2014.

#### 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.	-	Mineral has been extracted from Quarry-3.	
5b	Area under backfilling of mined out area	Part of Quarry -3.	Backfilling was proposed from the waste generation of Quarry-1 and backfilling could not be commenced due to non-working of Q-1 for want of Forest permission.	Mine operations were in suspension w.e.f. 17.05.2014.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No Proposal.	Not applicable.	

#### 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).	Annual report on PMCP under Rule 23(2) to be submitted.	Report Submitted for the FY 2014-15.	
6b	Area available for rehabilitation (ha) .	5.46 Ha of Q-3 Mahulsukha block.	Backfilling was proposed from the waste generation of Quarry-1 and backfilling could not be commenced due to non-working of Q-1 for want of Forest permission.	Mine operations were in suspension w.e.f. 17.05.2014.
6c	afforestation done (ha).	0.50 Ha	1.15 Ha.	
6d	No. of saplings planted during the year	800 saplings.	2200 saplings.	
6e	Cumulative no .of plants	No Information.	163651.	
6f	Any other method of rehabilitation	No proposal.	Not applicable.	
6g	Cost incurred on watch and care during the year	Rs. 20,000	No Information.	
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling ( Lx B x D	About 5.40 Ha area.	Backfilling could not be commenced due to non working of Q-1 for want of Forest permission.	Mine operations were in suspension w.e.f. 17.05.2014.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	Part of Q-3.	Backfilling of Q-3 could not be commenced due to non working of Q-1 for want of Forest permission.	Mine operations were in suspension w.e.f. 17.05.2014.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestati on on backfilled area	No Proposal.	Not applicable.	



6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No Proposal.	Not applicable.	
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal.	Not applicable.	
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	No specific proposal.	Not applicable.	
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.50 Ha	1.15 Ha.	
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Afforestation.	Afforestation.	
6p	Compliance of environmental monitoring (core zone and buffer zone)	Air, noise, surface water and ground water analysis are proposed to be done.	Being done.	Mine operations were in suspension w.e.f. 17.05.2014.

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Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	ROM Mineral: 84272.00 MT Salable Mineral: 75036.00 MT Sub-grade: 1920.00 MT	ROM Mineral: 1947.00 MT Salable Mineral: 1947.00 MT Sub-grade: 0.00 MT	Mine operations were in suspension w.e.f. 17.05.2014.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Manual.	Manual.	
7c	Different grade of mineral sorted out at mines.	Sub Grade: 10% Mn to 20% Mn Salable: >20% Mn	Not applicable as mine was under suspension during the inspection.	
7d	Any beneficiation process at mines	Manual sorting and Sizing.	Not observed as mine was under suspension during the inspection.	Mine operations were in suspension w.e.f. 17.05.2014.

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**Environment:**

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	0.5 Ha proposed.	No top soil generation.	Mine operations were in suspension w.e.f. 17.05.2014.
8b	Concurrent use or storage of topsoil	Proposd to collect and scrapped as and when required.	Not applicable as no top soil has been generated.	Mine is under suspension.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Seprate dumps for waste and rejects are proposed.	The Waste and Mineral Reject were stacked separately .	Mine operations were in suspension w.e.f. 17.05.2014.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste of Quarry-1 was proposed to backfill the part of Quarry-3.	Not applicable as mine was under suspension during the inspection.	Mine operations were in suspension w.e.f. 17.05.2014.

8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No specific proposal.	Waste dump has been established by the way of plantation and terracing.
8g	Survival rate	No Proposal.	57%
8h	Water sprinkling on roads to control airborne dust	Water sprinkling proposed to be done by Mobile water tanker.	Not observed.

#### Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly return in form F-2. Annual return in form H-2.	Monthly and Annual return were submitted in prescribed format.	
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Graduate Mining Engineer-2 Diploma Mining Engineer-1 Geologist-1	Mining Engineer- Mr. Narottam Kumar Geologist- Mr. M. Naik Manager- Mr. I. K. Saha	
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under working: 41.224 Ha. Reclamation and Rehabilitation : 0.00 Ha. Use for waste disposal: 19.02 Ha. Occupied by plant, buildings, residential, welfare buildings & roads: 3.98 Ha.	Covered under working: 27.00 Ha. Reclamation and Rehabilitation: 0.00 Ha. Use for waste disposal: 19.02 Ha. Occupied by plant, buildings, residential, welfare buildings & roads: 3.98 Ha.	Mine under suspension.

9d	Scrutiny of Annual return on afforestation	2200 Nos. of saplings planted during the year 2014-15.	2200 Nos. of saplings planted.	
9f	Scrutiny of Annual return on ROM stock and/or graded ore	1. Below 25% Mn: 85.037 MT 2. 25% to below 35%: 13135.294 MT 3. 35% to below 46%:2331.036 MT 4. 46% & above: 106.577 MT	1. Below 25% Mn: 85.037 MT 2. 25% to below 35%: 13135.294 MT 3. 35% to below 46%:2331.036 MT 4. 46% & above: 106.577 MT	No production as mine under suspension.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of production: 4438.47 Rs/Tonne	Cost of production: 4438.47 Rs/Tonne (Not verified)	Not verified.
9h	Scrutiny of Annual return on fixed assets	Fixed Assets: Rs. 1517000.00	Fixed Assets: Rs. 1517000.00 (not verified).	Not verified.

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**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

**Date :**

**(DILIP JAIN)**

Indian Bureau of Mines