

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/CR/JJP/MCDR-9/BBS-8/3/2001

Mine code : 11ORI19009

- (i) Name of the Inspecting : **DJ03**) **DILIP JAIN**
Officer and ID No.
- (ii) Designation : Junior Mining Geologist
- (iii) Accompanying mine :
Official with
Designation
- (iv) Date of Inspection : 16/03/2019
- (v) Prev.inspection date : 19/03/2016

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **TALANGI**
- (b) **Registration NO.** : **IBM/4421/2011**
- (c) Category : A Other than Fully Mech.
- (d) Type of Working : Opencast
- (e) Postal address
State : ORISSA
District : JAJPUR
Village : TALANGI
Taluka : SUKINDA
Post office : KANSA
Pin Code :
FAX No. : 0674-2530518
E-mail : idc@idcorissa.com
Phone : 0674-2530898
- (f) Police Station : Kansa
- (g) First opening date : 07/06/1993
- (h) Weekly day of rest : SUN
2. Address for : TALANGI CHROMITE MINE,M/S IDCOL
correspondance P.O.KANSA, DIST:JAJPUR
ORISSA
3. (a) Lease Number : ORI0628
- (b) Lease area : 65.68
- (c) Period of lease : 20
- (d) Date of Expiry : 15/09/2023
4. Mineral worked : CHROMITE Main

5. Name and Address of the

Lessee : M/S.IDCOL
 IDCOL House P.O. NO=78
 ,ASHOK NAGAR BHUBANESWAR
 KHURDA ORISSA
 Phone:
 FAX :0674-402218

Owner : Sri Suresh Chandra Mohapatra , IAS
 IDC of Odisha Ltd.,IDCOL
 HOUSE, Ashok Nagar, Unit-
 II, PB.No.78, Bhubaneswar-1
 KHURDA ORISSA
 Phone: 0674-2530898
 FAX : 0674-2530518

Agent : Sri B.K. Sahoo
 IDCOL Ferro Chrome & Alloys
 Ltd. & KHURDA ORISSA
 Phone:
 FAX : 06726-225524

Mining Engineer

Name : Sri Alok Vikash Giri,Full Time
 Qualification : B.Tech in Mining Engineering
 Appointment/ : 11/10/2017
 Termination date

Geologist

Name : Mr Sumanta Sahu,Full Time
 Qualification : M.Sc. in Geology
 Appointment/ : 20/06/2013
 Termination date

Manager

Name : Sri J.P.Mishra
 Qualification : Diploma in mining
 Appointment/ : 11/06/2015
 Termination date

6. Date of approval of Mining	:	Mining Scheme rule 12 MCDR1988	08/03/2006
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	18/11/2008
	:	Modif.of approved Mining Plan	24/04/2012
	:	MP modif under MCR 1960	24/04/2012
	:	MP review under 17(1) MCR 2016	21/03/2017

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	No proposal of the exploration for the reporting Year i.e. 2017-18.	No exploratory work has been carried out during 2017-18.	NIL.
1b	Exploration over lease area for geological axis 1 or 2	As per approved document dated 21/03/2017, no proposal of exploration during 2017-18.	As per approved document, the nature of the ore zone is banded type and already explored beyond the UPL. Unexplored part of lease area is	NIL.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	No specific proposal of exploration agency.	Exploration has not been carried out during the reporting year i.e. 2017-18 as no proposal of exploration.	NIL.
1d	Balance area to be explored to bring Geological axis in 1 or 2	As per approved document dated 21/03/2017, out of total lease area of 65.683 ha an area of 38.313 ha to be explored.	As per approved document, the nature of the ore zone is banded type and already explored beyond the UPL. Unexplored part of lease area is interpreted as barren. No proposal of exploration for remaining area.	NIL.

1e	Balance reserve as on 01/04/20	As per approved document dated 21/03/2017, the position of reserve and resource as on 27/11/2016 was as follows: Reserve: 0.325 mT. Resource: 0.215 mT.	Balance reserve and resource as on 01/04/2018 is as follows: Reserve: 0.265 mT. Resource: 0.215 mT.	mT stands for million tonnes. Figures of reserve and resource as on 01/04/2018 are as per AR 2017-18.
1f	General remarks of inspecting officers on geology, exploration etc	No proposal of exploration has been envisaged as the ore bends have been explored beyond the UPL.	Exploration work has not been carried out in the lease area during 2017-18.	NIL.

Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Development has been proposed at two locations in single quarry. N3290-3633/W1766-1931 and N3310-3645/W1440-1710.	The development of the quarry has been carried out within the approve proposal i.e. N3290-3633/W1766-1931 and N3310-3645/W1440-1710.	NIL.

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Proposal has been given for separate benches/ excavation in top soil, Ob and Mineral.	Top soil, OB and Mineral have been excavated separately as per the proposal.	NIL.
2c	Stripping ratio or ore to OB ratio	1:4.15 Tonnes/CuM	1:3.5 Tonnes/CuM	NIL.
2d	Quantity of topsoil generation in m3	1245 CuM	1150 CuM	Due to uneven occurrence, generation of top soil was less.
2e	Quantity of overburden generation in m3	247290 CuM	205813 CuM	NIL.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	The deposit is banded in nature and two locations have been proposed in single quarry.	The development of the quarry has been carried out within the approve proposal.	NIL.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	One pit namely Quarry-2 has been proposed for the production.	Production has been carried out form the quarry-2.	NIL.
3b	Quantity of ROM mineral production proposed	59520.00 tonnes.	59469.00 tonnes.	NIL.
3c	Recovery of sailable/usable mineral from ROM production	46645 tonnes.	46626 tonnes.	NIL.
3d	Quantity of mineral reject generation	12875 tonnes	12843 tonnes	NIL.

3e	Grade of mineral rejects generation and threshold value declared.	+10-15%Cr2O3	+10-15%Cr2O3	NIL.
3f	Quantity of sub grade mineral generation.	12875 tonnes	12843 tonnes	Same figures also mentioned in Mineral reject column.
3g	Grade of sub grade mineral generation	+10-15%Cr2O3	+10-15%Cr2O3	NIL.
3h	Manual / Mechanised method adopted for segregating from ROM	Mechanized method adopted for segregating from ROM.	Mechanized method observed for segregating from ROM..	NIL.
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	No Proposal of any Beneficiation study during 2017-18.	No beneficiation study during the year 2017-18.	NIL.
3j	Provision of drilling and blasting in mineral benches	Blast holes of 100-115 mm dia have been proposed in single row as well as in multi row on staggered pattern by wagon drilling.	Drilling and blasting was carried out as per proposal.	NIL.
3k	Provision of mining machineries in mineral benches	Excavator, Air Compressor, Tipper, Dumper, Dozer, COB plant, Water tanker etc.	Excavator, Air Compressor, Tipper, Dumper, Dozer, COB plant, Water tanker etc.	NIL.
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Height and width of the benches have been proposed to 6 and 10-12 mts respectively.	Height and width has been found as per proposal.	NIL.

3m	Total area covered under excavation/pits	As per approved document dated 21/03/2017, at the end of the plan period i.e.2021-22, an area of 26.957 Ha has been proposed under the excavation.	26.845 Ha area as on 01/04/2018.	Actual figure as per AR 2017-18.
3n	Ore to OB ratio for the pit/mine during the year.	1:4.15 Tonnes/CuM	1:3.5 Tonnes/CuM	NIL.
3o	Total area put in use under different heads at the end of year	As per approved document dated 21/03/2017, at the end of the plan period total area put under the different heads like excavation, OB dumping, Mineral Storage, Infrastructure , Road, Green belt etc. was 53.83 Ha.	An area of 53.95 Ha has been utilized for mining and related activity by 01/04/2018.	Actual figure as per AR 2017-18.
3p	Production of ROM mineral during the last five year period as applicable	2013-14 = 123463 MT 2014-15 = 115538 MT 2015-16 = 82040 MT 2016-17 = 58278 MT 2017-18= 59520 MT	2013-14 = 50079 MT 2014-15 = 54254 MT 2015-16 = 36589 MT 2016-17=36589 MT 2017-18=59469 MT	MT stands for Metric tonnes.

3q	General remarks of inspecting officers on method of mining etc.	Fully mechanized opencast method of mining has been proposed to win the ore.	Full mechanized opencast method of mining is being practiced at mine.	NIL.
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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)	Top soil was proposed to use for spreading over backfilled area. Separate dumping has been proposed for MR and OB.	Top soil generated during the year 2017-18 has been utilized as per proposal. OB and MR has been stacked separately as per proposal.	NIL.
4b	Location of topsoil, OB and mineral reject dumps	Top soil was proposed to use for spreading over backfilled area. Waste material has been proposed to backfilled in the quarry-1 area.	Dumping of top soil, mineral reject and waste has been carried out as per proposal.	NIL.
4c	Number of dumps within lease area and outside of lease area	Within lease area: 2 dumps, outside lease area: NIL	Within lease area: 2 dumps, outside lease area: NIL	NIL.
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Waste material has been proposed to backfilled in the quarry-1 area during 2017-18.	Dumping of waste has been found as per proposal.	NIL.
4e	Number of active and alive dumps.	Proposal of backfilling has been given, no proposal for waste dumping.	No active dump as Waste material has been proposed to backfilled.	NIL.

4f	Number of dead dumps.	Two.	Two.	NIL.
4g	Number of dumps established.	Two.	Two.	NIL.
4h	Whether Retaining wall or garland drain all along dumps are there.	Proposal of retaining wall and garland drain has been envisaged.	Retaining wall and garland drain has been observed along the dumps.	NIL.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall - 2000m Garland drain - 2450 m	Retaining wall: NIL. Garland drain - 1300m	Forest diversion proposal for the northern side of quarry-2 is under process and yet not been obtained.
4j	Number of settling ponds	No proposal of settling tank during 2017-18.	Not applicable.	NIL.
4k	Specific comments of inspecting officer on waste dump management	Top soil was proposed to use for spreading over backfilled area. Waste material has been proposed to backfilled in the quarry-1 area.	Dumping of top soil, mineral reject and waste has been carried out as per proposal.	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.	For the year 2017-18, an area of 0.686 Ha of quarry-1 has been proposed for backfilling.	Around an area of 0.685 Ha has been backfilled.	Actual figure as per PMCP report submitted under MCDR, 2017.

5b	Area under backfilling of mined out area	As per approved document dated 21/03/2017, area already under backfilling was 6.071 Ha and an area of 0.686 Ha was proposed for backfilling during 2017-18.	Around an area of 0.685 Ha has been backfilled.	NIL.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	Top soil was proposed to use for spreading over backfilled area.	Top soil generated during the year 2017-18 has been utilized as per proposal.	NIL.
5d	Total area fully reclaimed and rehabilitated	As per approved document dated 21/03/2017, area already under backfilling was 6.071 Ha and an area of 0.686 Ha was proposed for backfilling during 2017-18.	Around an area of 0.685 Ha has been backfilled.	NIL.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	For the year 2017-18, an area of 0.686 Ha of quarry-1 has been proposed for backfilling.	Around an area of 0.685 Ha has been backfilled.	Actual figure as per PMCP report submitted under MCDR, 2017.

Progressive Mine Clousre Plan:

Sl.No.	Item	Propasals	Actual work	Remarks
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6a	Whether Annual report on PMCP submitted on time and correctly. Rule 23 E(2).	As per rule 26(2) of MCDR, 2017, PMCP report to be submitted for previous year by 1st July.	Annual report of PMCP has not been submitted for the year 2017-18.	NIL.
6b	Area available for rehabilitation (ha) .	Rehabilitation of an area of 0.25 Ha along sides of Tailangi Nala and an area of 0.25 Ha over old waste dump has been proposed for rehabilitation .	Rehabilitation by the way of plantation has been carried out as per proposal.	NIL.
6c	afforestation done (ha).	A total of 0.85 HA area including 0.25 Ha area along Tailangi Nala, 0.25 HA over old waste dumps and 0.35 Ha area over backfilled area.	Afforestation work has been carried out as per proposal.	NIL.
6d	No. of saplings planted during the year	A total of 2125 number of saplings.	A total of 5000 numbers of plants have been planted	Figures as per AR 2017-18.
6e	Cumulative no .of plants	A total of 10625 numbers of saplings have been proposed from 2017-18 to 2021-22.	A total of 5000 numbers of plants have been planted during 2017-18.	Figures as per AR 2017-18.
6f	Any other method of rehabilitation	No specific proposal of rehabilitation other than plantation.	Not applicable as no proposal.	NIL.

6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	An area of around 0.686 Ha was proposed to backfilled during reporting year i.e. 2017-18.	Around an area of 0.685 Ha has been backfilled during the year 2017-18.	NIL.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	247290 CuM of waste.	205813 CuM of waste.	NIL.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on on backfilled area	An area of 0.35 Ha has been proposed for afforestation on backfilled area.	Afforestation has been carried out over 0.35 Ha area of backfilling.	NIL.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal of making of water reservoir.	Not applicable as no proposal.	NIL.
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No specific proposal on reclamation and rehabilitation by any other specific means other than backfilling and plantation.	Not applicable as no proposal.	NIL.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	An area of 0.25 Ha along Tailangi Nala has been proposed for afforestation.	Afforestation has been carried out as per proposal.	NIL.

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	By plantation of 625 numbers of saplings.	Afforestation has been carried out as per proposal.	NIL.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	Afforestation.	Afforestation.	NIL.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Proposal has been given for environment monitoring in core and buffer zone.	Environment Monitoring was carried out in core and buffer zone for reporting year.	NIL.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	An area of around 0.686 Ha was proposed to backfilled during reporting year i.e. 2017-18. Proposal has been given for environment monitoring in core and buffer zone.	Around an area of 0.685 Ha has been backfilled during the year 2017-18. Environment monitoring carried out during 2017-18	NIL.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Grade wise sorting within lease area has been proposed.	Grade wise sorting has been observed within lease area.	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.	Chrome Ore +30% Cr2O3, 15 to 30%Cr2O3 and 10 to 15% Cr2O3.	Chrome Ore +30% Cr2O3, 15 to 30%Cr2O3 and 10 to 15% Cr2O3.	NIL.
7d	Any beneficiation process at mines .	There exist two COB plant in lease area having capacity 5 TPH and 10 TPH. It has been proposed to beneficiate Chrome Ore having grade between 15 to 30% Cr2O3.	Chrome Ore quantity of 29384 tonnes has been beneficiate during the year 2017-18 as per annual return of 2017-18.	NIL.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Beneficiation of Chrome Ore having grade between 15 to 30 % Cr2O3 has been envisaged.	Beneficiation of low grade chrome has been carried out during the year 2017-18.	NIL.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	Top soil was proposed to use for spreading over backfilled area.	Top soil generated during the year 2017-18 has been utilized as per proposal.	NIL.
8b	Concurrent use or storage of topsoil	Top soil was proposed to use for spreading over backfilled area.	Top soil generated during the year 2017-18 has been utilized as per proposal.	NIL.

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste material has been proposed to backfill in Quarry-1. Mineral reject is proposed to stack separately.	Backfilling and stacking has been observed as per proposal.	NIL.
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	Waste quantity of 247290 CuM was proposed for backfilling.	Waste quantity of 205813 CuM was used for backfilling.	NIL.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	An area of around 0.686 Ha was proposed to reclamation by the way of backfilling during reporting year i.e. 2017-18.	Around an area of 0.685 Ha has been backfilled during the year 2017-18.	NIL.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	A total of 2125 number of saplings.	A total of 5000 numbers of plants have been planted.	As per AR 2017-18.
8g	Survival rate	No specific proposal.	60%	As per AR 2017-18.
8h	Water sprinkling on roads to control airborne dust	To control the airborne dust water sprinkling has been proposed.	Water sprinkling has been observed.	NIL.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	To improve the aesthetic beauty of mines proposal of plantation has been envisaged.	Plantation has been carried out as per proposal.	NIL.

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 regularly.	Scrutiny of AR 2017-18.
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, Mines Manager and geologist has been appointed at the mine.	NIL.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Covered under o/c working and exploited: 24.865 ha, Waste dumping: 12.995 Ha, Infrastructure : 5.902 Ha.	The land details furnished in AR seems to be in order.	NIL.
9d	Scrutiny of Annual return on afforestation	5000 numbers of saplings	Found to be in order.	NIL.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	A mineral reject of 12843 tonnes have been generated during the year 2017-18. The figures could not be reflected in the annual return as no specific column/row for the material below 30% Cr2O3. The grade of Mineral reject has been proposed between 10 to 30% Cr2O3.	12843 tonnes. The figures have been furnished cumulatively in below 40% Cr2O3 of para 2 of part VI.	NIL.

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM stock- 1504.74, Total Graded Stock- 16894.903 tonnes, Concentrate:17 58.110 tonnes.	Found to be in order.	Figures as per AR 2017-18 as on 01/04/2018.
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Ex-mine price (Lump) Below 40% : Rs 7055/-, Ex-Mine Price (Fines): Below 40%- Rs. 2450/-, 40 to below52%- 10927/- Cost of production: Rs. 4985.00 per tonne.	The information furnished about the ex-mine price and cost of production under the annual return for the year 2017-18 seems to be in order.	As per AR 2017-18.
9h	Scrutiny of Annual return on fixed assets	The value of fixed assets furnished is Rs. 82625417/-	Appears to be in order.	As per AR 2017-18.
9k	Scrutiny of Annual return on mining machineries	Pumps, Back Hoe, Dumper, Dozer, Air Compressor etc.	Information furnished 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

Date :

(DILIP JAIN)

Indian Bureau of Mines