

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

MCDR INSPECTION REPORT

Bhubaneshwar regional office

Mine file No : ORI/IRON-Mn/KJR/MCDR-84

Mine code : 30ORI08117

- (i) Name of the Inspecting : **U11**) **DAYANAND UPADHYAY**
Officer and ID No.
- (ii) Designation : Sr. Asst. Contrl. Mines
- (iii) Accompanying mine : Sri D. Patra (Mines manager)
Official with
Designation
- (iv) Date of Inspection : 24/10/2021
- (v) Prev.inspection date : 09/01/2021

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **SIRKAGUTU IRON & MANGANES**
- (b) **Registration NO.** : **IBM/76/2011**
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address
- State : ORISSA
- District : KEONJHAR
- Village : Sirkagutu
- Taluka : Joda
- Post office : Joda
- Pin Code : 758034
- FAX No. : 0674-2391231
- E-mail : sirkaguttumines@prakash.co
- Phone : 0674-2391231
- (f) Police Station : Keonjhar
- (g) First opening date : 12/02/2020
- (h) Weekly day of rest : SUN
2. Address for : SIRKAGUTTU
correspondance KEONJHAR
ODISHA
3. (a) Lease Number :
- (b) Lease area :
- (c) Period of lease :
- (d) Date of Expiry :
4. Mineral worked :

5. Name and Address of the

Lessee : PRAKASH INDUSTRIES LTD
KEONJHAR KEONJHAR ORISSA
Phone:
FAX :

Owner : PRAKASH INDUSTRIES LIMITED
93 Kharvel Nagar
Bhubaneswar KHURDA ORISSA
Phone: 0674-2391231
FAX : 0674-2391231

Agent : Deepak Dash
93, 1st floor, Kharvel
Nagar Bhubaneswar KEONJHAR
ORISSA
Phone: 0674-2391231
FAX : 0674-2391231

Geologist

Name : Sri Vijay Divakar, Full Time
Qualification : M. Sc.
Appointment/ : 03/07/2019
Termination date

Manager

Name : Sri Debabrata Patra
Qualification : B Tech
Appointment/ : 03/07/2019
Termination date

6. Date of approval of Mining : MP review under 17(1) MCR 2016 11/03/2021
Plan/Scheme of Mining

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	67 Nos. of bore hole	67 Nos. of bore hole	In 2020-21, 67 Nos. of bore hole drilled by lessee.
1b	Exploration over lease area for geological axis 1 or 2	G1 level	G1 level	G1 level of exploration.
1c	Exploration Agencies and Expenditure in lakh rupees during the year	Not specified.	Exploration carried out by M/s Gem Consultant and M/s NREM(P)L . Total expenditure incurred Rs 77.53 lakh.	Exploration carried out by M/s Gem Consultant and M/s NREM(P)L . Total expenditure incurred Rs 77.53 lakh.
1d	Balance area to be explored to bring Geological axis in 1 or 2	Within G1 level and 3.641 ha G2 level.	Exploration carried out within G1 level and 3.641 ha G2 level.	Exploration carried out within G1 level and 3.641 ha G2 level.
1e	Balance reserve as on 01/04/20	As per Review of Mining plan approved on 11.03.2021, Proved reserve= 4365000T	Balance Reserve as on 01.043.21, 4160480T	Balance Reserve as on 01.043.21, 4160480T
1f	General remarks of inspecting officers on geology, exploration etc	67 Nos. of bore hole	In 2020-21, 67 Nos. of bore hole drilled by lessee.	In 2020-21, 67 Nos. of bore hole drilled by lessee.

Development :

Sl.No.	Item	Proposals	Actual work	Remarks
2a	Location of development w.r.t.lease area	Location of development N2410870 to N2411070 & E327100 to E327200	Location of development carried out within approved proposal..	Location of development carried out within approved proposal..

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	Separate benches in overburden and mineral	Separate benches in overburden and mineral maintained.	Separate benches in overburden and mineral maintained.
2c	Stripping ratio or ore to OB ratio	1: 0.23T/cu.m	1: 0.17T/cu.m	Stripping ratio 1: 0.17T/cu.m
2d	Quantity of topsoil generation in m3	2898 Cum	225 Cum	Due to less ROM production, top soil generation is less.
2e	Quantity of overburden generation in m3	1,33,000 Cu.m	50,000 Cu.m	Due to less ROM production, OB generation is less.
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	Location of development N2410870 to N2411070 & E327100 to E327200	Development carried out within approved proposal.	Development carried out within approved proposal.

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	1 Quarry	1 Quarry	1 Quarry for production.
3b	Quantity of ROM mineral production proposed	580254 T	4,72,660 T	ROM production 2020-21 is 4,72,660 T
3c	Recovery of sailable/usable mineral from ROM production	475370T	394995T	ROM production 2020-21 is 4,72,660 T
3d	Quantity of mineral reject generation	104884T	77665 T	ROM production 2020-21 is 4,72,660 T
3e	Grade of mineral rejects generation and threshold value declared.	45-55% Fe	45-55% Fe	Grade of mineral reject generation 45-55% Fe.

3f	Quantity of sub grade mineral generation.	104884T	77665 T	Grade of mineral reject generation 45-55% Fe.
3g	Grade of sub grade mineral generation	45-55% Fe.	45-55% Fe.	Grade of mineral reject generation 45-55% Fe.
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.	Not proposed.	Only dry screening and crushing is practiced.	Only dry screening and crushing is practiced.
3j	Provision of drilling and blasting in mineral benches	Deep hole drilling & Blasting	Deep hole drilling & controlled Blasting is being practiced.	Deep hole drilling & controlled Blasting is being practiced.
3k	Provision of mining machineries in mineral benches	Shovel & dumper combination	Shovel & dumper combination	Shovel & dumper combination
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	Bench height-6m	Bench height is suitably matched with the excavator.	Bench height is suitably matched with the excavator.
3m	Total area covered under excavation/pits	1.932 ha proposed during approved mining plan period.	About 1.20ha area has been covered under excavation pits at end of 2020-21.	About 1.20ha area has been covered under excavation pits at end of 2020-21.
3n	Ore to OB ratio for the pit/mine during the year.	1: 0.23T/cu.m	1: 0.17T/cu.m	Stripping ratio 1: 0.17T/cu.m

3o	Total area put in use under different heads at the end of year	Total area proposed under different heads during approved mining plan period are 8.122 ha	Area covered under different heads at the end of 2020-21 is 4.43 ha.	Area covered under different heads at the end of 2020-21 is 4.43 ha.
3p	Production of ROM mineral during the last five year period as applicable	2016-17:- 176929 MT 2017-18:- 361116 MT 2018-19:- 472964 MT 2019-20:- 999075 MT 2020-21:- 580254 MT	2016-17:- Nil 2017-18:- Nil 2018-19:- Nil 2019-20:- 87850 MT 2020-21:-472660 MT	ROM production is within approved proposal.
3q	General remarks of inspecting officers on method of mining etc.	Excavation of ROM has been proposed in single pit.	Mechanized method of mining is practiced with excavator dumper combination. Excavation of ROM has been concentrated in single pit as per proposal.	Mechanized method of mining is practiced with excavator dumper combination. Excavation of ROM has been concentrated in single pit as per proposal.

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dumping for overburden/waste, top soil and mineral reject.	Separate dumping for overburden/waste, top soil and mineral reject are carried out.	Separate dumping for overburden/waste, top soil and mineral reject are carried out.

4b	Location of topsoil, OB and mineral reject dumps	Top Soil N2411330-2411360, E327130-327145 OB N2410560-2410800 E-327050-327220 Mineral Reject Dump N-2411250-2411315 . E-327120 -327180	Top Soil N2411330-2411360, E327130-327145 OB N2410560-2410790 E-327085-327190 Mineral Reject Dump N-2411260--2411305 . E-327130 -327175	Location of topsoil, OB & mineral reject dumps are within approved proposal.
4c	Number of dumps within lease area and outside of lease area	Dump-1 Within Lease	Dump-1 Within Lease	Dump-1 Within Lease
4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	One waste OB dump out side the UPL .	One waste OB dump out side the UPL .	One waste OB dump out side the UPL .
4e	Number of active and alive dumps.	One OB/waste dump	One OB/waste dump	One active OB/waste dump.
4f	Number of dead dumps.	Not proposed.	Nil.	There is no dead dump.
4g	Number of dumps established.	Not proposed.	There is no dead dump.	There is no dead dump.
4h	Whether Retaining wall or garland drain all along dumps are there.	Retaining wall 520m, garland drain 400m	Retaining wall 520m, garland drain 400m	Proposed Retaining wall and garland drain constructed.
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall 520m, garland drain 400m	Retaining wall 520m, garland drain 400m	Proposed Retaining wall and garland drain constructed.
4j	Number of settling ponds	One	One settling pond	One settling pond constructed.
4k	Specific comments of inspecting officer on waste dump management	One OB/waste dump and onemineral reject dump.	Location of topsoil, OB & mineral reject dumps are within approved proposal.	Location of topsoil, OB & mineral reject dumps are within approved proposal.

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 as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5b	Area under backfilling of mined out area	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5d	Total area fully reclaimed and rehabilitated	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

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 provision of MCDR 2017.	Annual return on PMCP has been submitted.	Annual return on PMCP has been submitted.
6b	Area available for rehabilitation (ha) .	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6c	afforestation done (ha).	0.3 ha.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.

6d	No. of saplings planted during the year	750 nos. of saplings	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.
6e	Cumulative no. of plants	Not specifies.	Cumulative 2250 no. of plantation carried out.	Cumulative 2250 no. of plantation carried out.
6f	Any other method of rehabilitation	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6g	Cost incurred on watch and care during the year	Not specified.	Cost incurred on watch & care Rs 5.28 Lakh.	Cost incurred on watch & care Rs 5.28 Lakh.
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	0.3 ha area	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.
6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	0.3 ha area	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	0.3 ha area	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.
6p	Compliance of environmental monitoring (core zone and buffer zone)	Quarterly monitoring	monitoring of air, water and noise level are being carried out.	monitoring of air, water and noise level are being carried out.
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	No proposal of backfilling as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
7a	ROM Mineral dispatch or grade-wise sorting within lease area	Gradewise sorting.	Gradewise sorting.	Gradewise sorting.

7b	Method of grade-wise mineral sorting i.e. manual or mechanical.	Mechanized	Mechanized	Mechanized
7c	Different grade of mineral sorted out at mines.	45% to 55% Fe and +55% Fe.	Different grades of minerals 45% to 55% Fe and +55% Fe sorted out at mines site.	Different grades of minerals 45% to 55% Fe and +55% Fe sorted out at mines site.
7d	Any beneficiation process at mines .	Not proposed.	Dry crushing and screening Of ROM is being practiced.	Dry crushing and screening Of ROM is being practiced.
7e	General remarks of inspecting officer on Mineral conservation and beneficiation issues	Gradewise sorting.	Gradewise sorting. Dry crushing and screening Of ROM is being practiced.	Gradewise sorting. Dry crushing and screening Of ROM is being practiced.

Environment:

Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	2898 Cum	225 Cum top soil generated in 2020-21, which is stacked and being utilised in plantation.	225 Cum top soil generated in 2020-21, which is stacked and being utilised in plantation.
8b	Concurrent use or storage of topsoil	2898 Cum	225 Cum top soil generated in 2020-21, which is stacked and being utilised in plantation.	225 Cum top soil generated in 2020-21, which is stacked and being utilised in plantation.
8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Separate dumping for overburden/waste and mineral reject.	Separate dumping for overburden/waste and mineral reject are carried out.	Separate dumping for overburden/waste and mineral reject are carried out.

8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	No proposal as pit is not exhausted.	Pit is not matured for reclamation and rehabilitation.	Pit is not matured for reclamation and rehabilitation.
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.	Afforestation is carried out in 0.3 ha area by 750 nos. of plantation.
8g	Survival rate	Not specified.	Survival rate 73.33%	Survival rate 73.33%
8h	Water sprinkling on roads to control airborne dust	Mobile water sprinklers	Mobile water sprinklers are used to control air borne dust.	Mobile water sprinklers are used to control air borne dust.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	750 nos saplings in 2020-21	Lessee has planted 750 nos saplings in 2020-21. Aesthetic beauty is maintained by plantation.	Aesthetic beauty is maintained by plantation.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
9a	Status of submission of Monthly and Annual returns	Monthly & Annual returns are being submitted	Monthly & Annual returns are being submitted	Monthly & Annual returns are being submitted

9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	The employment status of mining engineer, geologist & mine manager have been furnished in the annual return.	Mining engineer, geologist & mine managers were employed in the mine.	Mining engineer, geologist & mine managers were employed in the mine.
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area under Excavation- 1.2, O.B Dump - 0.24, Infrastructure - 0.50, Others - 2.79ha	Area under Excavation- 1.2, O.B Dump - 0.24, Infrastructure - 0.50, Others - 2.79ha	Area under Excavation- 1.2, O.B Dump - 0.24, Infrastructure - 0.50, Others - 2.79ha
9d	Scrutiny of Annual return on afforestation	750 no.	750 no.	750 no.
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	101940T, 51.20%Fe	101940T, 45-55%Fe	101940T, 45-55%Fe
9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM closing stock-141425T	ROM closing stock-141425T	ROM closing stock-141425T
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Cost of Production Rs. 878.62/-	Cost of Production Rs. 878.62/-	Cost of Production Rs. 878.62/-
9h	Scrutiny of Annual return on fixed assets	Rs 142132831/-	Rs 142132831/-	Rs 142132831/-

9k	Scrutiny of Annual return on mining machineries	Excavator 0.9 Cum 2 Nos. Excavator 1.8 Cum 2 Nos, 5 Nos. Dumper - 20 Tonne, 1 No. Drilling Machine - 100Dia, 20 Tonne, 1 No. Drilling Machine - 100Dia, Crusher - 200 TPH- 1 no, Screen -200 TPH-1 no, Water tanker- 2 nos-12000 ltr	Excavator 0.9 Cum 2 Nos. Excavator 1.8 Cum 2 Nos, 5 Nos. Dumper - 20 Tonne, 1 No. Drilling Machine - 100Dia, Crusher - 200 TPH- 1 no, Screen -200 TPH-1 no, Water tanker- 2 nos-12000 ltr	Excavator 0.9 Cum 2 Nos. Excavator 1.8 Cum 2 Nos, 5 Nos. Dumper - 20 Tonne, 1 No. Drilling Machine - 100Dia, Crusher - 200 TPH- 1 no, Screen -200 TPH-1 no, Water tanker- 2 nos-12000 ltr
----	---	---	---	---

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

Date :

(DAYANAND UPADHYAY)

Indian Bureau of Mines