

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

Review and updation of Mining Plan REPORT

Kolkata regional office

Mine file No : KOL/JHK/SB(W)/FE(G-1)

Mine code : 30BHR27010

- (i) Name of the Inspecting : **P002**) **PHILLIP HAPADGARA**
Officer and ID No.
- (ii) Designation : Senior Mining Geologist
- (iii) Accompanying mine : MR T C ANAND HEAD GEOLOGY, TANVIR JAFFAR ,SPDAS MINE
Official with
Designation
- (iv) Date of Inspection : 10/10/2023
- (v) Prev.inspection date : 05/11/2018

PART-I : GENERAL INFORMATION

1. (a) **Mine Name** : **GUA**
- (b) **Registration NO.** :
- (c) Category : A Fully Mechanised
- (d) Type of Working : Opencast
- (e) Postal address :
State : JHARKHAND
District : SINGHBHUM (WEST)
Village : GUA
Taluka : CHAIBASA
Post office : GUA
Pin Code : 833213
FAX No. : 06596 263714
E-mail : rmdsail@gmail.com
Phone : 06596 263713
- (f) Police Station : GUA
- (g) First opening date : 12/09/1919
- (h) Weekly day of rest : SUN
2. Address for : 50 CHOWRINGHEE ROAD .
correspondance : KOLKATA .
WEST BENGAL.
3. (a) Lease Number : BHR0057
- (b) Lease area : 1443.76
- (c) Period of lease : 50
- (d) Date of Expiry : 21/02/2029
4. Mineral worked : MANGANESE ORE Associated
IRON ORE Main

5. Name and Address of the

Lessee : STEEL AUTHORITY OF INDIA LTD.
 INDUSTRY HOUSE 5TH & 6TH
 FLOOR 10, CAMAC STREET
 KOLKATA WEST BENGAL
 Phone:033-22822316/0462/3385
 FAX :033-22822316/0462

Owner : Amarendu Prakash
 Steel Authority Of India
 Limited Bokaro Steel Plant
 Bokaro-827001 SINGHBHUM
 (WEST) JHARKHAND
 Phone: 05642240300,024
 FAX : (06542)240/82

Agent : MANASH BISWAS
 GUA IRON ORE MINE AT&P.O
 GUA, DIST. SINGHBHUM WEST
 JHARKHAND SINGHBHUM (WEST)
 JHARKHAND
 Phone: 8986881501
 FAX :

Mining Engineer

Name : B. N. SINGH,Full Time
 Qualification : AMIE(MINING)
 Appointment/ : 01/05/2008
 Termination date

Geologist

Name : Dr. T.C. Ananda,Full Time
 Qualification : M.Sc.(Geo)
 Appointment/ : 01/03/2008
 Termination date

Manager

Name : A. K. MISHRA
 Qualification : B.Tech. (MINING)
 Appointment/ : 08/08/2017
 Termination date

6. Date of approval of Mining	:	Existing rule 11 MCDR1988	20/06/2000
Plan/Scheme of Mining	:	Mining Scheme rule 12 MCDR1988	05/05/2006
	:	Renewal under rule 24 MCR1960	16/10/2009
	:	Modif.of approved Mining Plan	18/08/2010
	:	MP review under 17(1) MCR 2016	01/02/2019
	:	MP modif under 17(3) MCR 2016	20/12/2019
	:	MP modif under 17(3) MCR 2016	17/03/2022
	:	MP modif under 17(3) MCR 2016	11/08/2023

PART - II : OBSERVATION/COMMENTS OF INSPECTING OFFICERS

Exploration :

Sl.No.	Item	Proposals	Actual work	Remarks
1a	Backlog of previous year	NIL	NIL	Total 2721.85 meterage of core drilling exploration has been done within 361.295 Ha area from 01.04.2023 to 10.10.2023. However, total 6449.35 meterage has been done since from 23.10.2022 to 10.10.2023
1b	Exploration over lease area for geological axis 1 or 2	54 nos	63 nos	Total 2721.85 meterage of core drilling exploration has been done within 361.295 Ha area from 01.04.2023 to 10.10.2023. However, total 6449.35 meterage has been done since from 23.10.2022 to 10.10.2023
1c	Exploration Agencies and Expenditure in lakh rupees during the year	NA	M/s GEMCO KATI, Maharashtra. Rs.24206500/-	M/s GEMCO KATI, Maharashtra. Rs.24206500/-
1d	Balance area to be explored to bring Geological axis in 1 or 2	not such proposal	nil	Under Form-C revised proposal raised for 166 nos. of BH in 807.77 Ha virgin area of Duarguiburu lease as per MCDR'12(4) 2017 on 16.06.2021
1e	Balance reserve as on 01/04/20	(111): 123710118 T (211): 51187811T As on 01.04.2022	111: 127542422 T 221: 52311742 T As on 01.04,2023	nil

1f	General remarks of inspecting officers on geology, exploration etc	NA	NA	Geologically, the terrain forms a part of the oldest meta-sedimentary and metavolcanic formations of the Chhotanagpur plateau. The iron rich formations of the Bonai-Keonjhar range form part of the Iron Ore Series. Total 2721.85 meterage of core drilling exploration has been done within 361.295 Ha area from 01.04.2023 to 10.10.2023. However, total 6449.35 meterage has been done since from 23.10.2022 to 10.10.2023
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Development :

Sl.No.	Item	Propasals	Actual work	Remarks
2a	Location of development w.r.t.lease area	OT HILL: 720 mRL- 730mRL, 730 mRL- 740 mRL, 740 mRL-750 mRL, 750 mRL- 760 mRL, 760 mRL-770 mRL, 770 mRL-780 mRL, 780 mRL- 790 mRL, 790 mRL-800 mRL. 2nd Level: 770 mRL- 780 mRL, 780 mRL- 790 mRL, 790 mRL- 800 mRL. Bailhill (SW): 820 mRL- 830 mRL, 830 mRL- 840 mRL, 840 mRL-850 mRL, 850 mRL- 860 mRL.	OT HILL: 720 mRL-730mRL, 730 mRL- 740 mRL, 740 mRL-750 mRL, 750 mRL-760 mRL, 760 mRL-770 mRL, 770 mRL-780 mRL, 780 mRL-790 mRL, 790 mRL-800 mRL. 2nd Level: 770 mRL- 780 mRL, 780 mRL-790 mRL, 790 mRL- 800 mRL. Bailhill (SW): 820 mRL- 830 mRL, 830 mRL- 840 mRL, 840 mRL- 850 mRL, 850 mRL- 860 mRL.	ROM production 497961.0 T as on 30.09.2023

2b	Separate benches in topsoil, overburden and minerals (Rule 15)	no such proposal	Nil	No Topsoil available
2c	Stripping ratio or ore to OB ratio	1:0.19	1:0.13	nil
2d	Quantity of topsoil generation in m3	NA	NA	no top soil available
2e	Quantity of overburden generation in m3	1796583 cum	518793 cum	nil
2f	General remarks of inspecting officers on development of pit w.r.t. type of deposit etc	-	-	development and production is mainly from OT hill, 2nd level, and Bai hill have been done as per fleet availability

Exploitation:

Sl.No.	Item	Propasals	Actual work	Remarks
3a	Number of pit proposed for production	03 nos	03 nos	proposed pits for development and production are OT hill, 2nd level and Bai hill
3b	Quantity of ROM mineral production proposed	9400915.00 T	3961310 T	production have been done as per fleet availability
3c	Recovery of sailable/usable mineral from ROM production	100%	100%	nil
3d	Quantity of mineral reject generation	nil	nil	nil
3e	Grade of mineral rejects generation and threshold value declared.	nil	nil	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	Mechanical	Mechanical	nil
3i	Any analysis or beneficiation study proposed and carried out for sub grade mineral and rejects.	no such proposal	30.0 T of samples has been sent to R&D lab of NMDC, Hyd. Testing is under process.	nil
3j	Provision of drilling and blasting in mineral benches	Provision of drilling & blasting in mineral benches is in proposal	as per proposal	nil
3k	Provision of mining machineries in mineral benches	Provision of mining machineries in mineral benches is kept in proposal	as per proposal with combinaiton of HEMM Fleet	nil
3l	Whether height of benches in overburden and mineral suitable for method of mining proposed in MP/SOM	proposal to keep bench height at 10 m maximum	benchs height are kept at 8.5m to 9.5 m	nil
3m	Total area covered under excavation/pits	274.691 Ha	274.691 Ha	nil
3n	Ore to OB ratio for the pit/mine during the year.	1:0.19	1:0.13	nil
3o	Total area put in use under different heads at the end of year	area under current (O-C) Workings: 183 ha, area under waste disposal: 22.65, Occupied by plant, buildings, residential, welfare buildings and roads: 17.68 ha, area under Fines Dump plus Afforestation: 53.16 ha	area under current (O-C) Workings: 183 ha, area under waste disposal: 22.65, Occupied by plant, buildings, residential, welfare buildings and roads: 17.68 ha, area under Fines Dump plus Afforestation: 53.16 ha	nil

3p	Production of ROM mineral during the last five year period as applicable	2018-19: 10.0 mill T 2019-20: 5.97 mill T 2020-21: 6.03 mill T 2021-22: 6.85 mill T 2022-23: 9.4 mill T	2018-19: 3.70 mill T 2019-20: 3.69 mill T 2020-21: 3.11 mill T 2021-22: 4.14 mill T 2022-23: 3.96 mill T	nil
3q	General remarks of inspecting officers on method of mining etc.	-	-	Production achieved from OT hill, 2nd level, and Bai hill as per as per fleet availability

Solid Waste Management - Dumping:

Sl.No.	Item	Propasals	Actual work	Remarks
4a	Separate dumping of topsoil, OB and mineral rejects (Rule 32,33)	Separate dump proposed for waste/ OB. No proposal for mineral reject and top soil	waste/ OB dumped on earmarked location. No dumping of mineral reject and top soil	No Top soil occurrence at proposed area.
4b	Location of topsoil, OB and mineral reject dumps	Location of OB dump(dd:mm:ss.ss): OT Hill Dump :Latitude 22:10:38.26 to 22:10:45.50 longitude 85:17:59.54 to 85:18:05.05, Ranichua Dump: latitude 22:10:07.52, longitude 22:09:53.75 to 22:10:07.52, longitude 85:17:59.54 to 85:17:25.24	Location of OB dump(dd:mm:ss.ss): OT Hill Dump :Latitude 22:10:38.26 to 22:10:45.50 longitude 85:17:59.54 to 85:18:05.05, Ranichua Dump: latitude 22:10:07.52, longitude 85:17:59.54 to 85:17:25.24	nil
4c	Number of dumps within lease area and outside of lease area	02 within lease area	02 within lease area	nil

4d	Location of dumps w.r.t. ultimate pit limit (Rule 16)	Location of OB dump(dd:mm:ss.ss): OT Hill Dump :Latitude 22:10:38.26 to 22:10:38.26 to 22:10:45.50 longitude 85:17:59.54 to 85:18:05.05, 85:17:59.54 to 85:18:05.05, Ranichua Dump: latitude 22:10:07.52, longitude 85:17:59.54 to 22:09:53.75 to 22:10:07.52, longitude 85:17:59.54 to 85:17:25.24	Location of OB dump(dd:mm:ss.ss): OT Hill Dump :Latitude 22:10:38.26 to 22:10:45.50 longitude 85:17:59.54 to 85:18:05.05, 22:09:53.75 to 22:10:07.52, longitude 85:17:59.54 to 85:17:25.24	nil
4e	Number of active and alive dumps.	02 nos	02 nos	nil
4f	Number of dead dumps.	nil	nil	nil
4g	Number of dumps established.	O.T. Hill-02 Ranichua-02	O.T. Hill-02 Ranichua-02	dumps area Terraced and stabilized
4h	Whether Retaining wall or garland drain all along dumps are there.	Yes	Yes	In compliance of Protective measures of waste dump, Terraces at Ranichua as proposed in approved MRMP dated 11.08.2023
4i	Length of Retaining wall or garland drain all along dumps	Retaining wall -368m, Garland drains-368m.	Garland drains of 3311.0 m & 2419.0 m has been prepared at Ranichua & O.T. Hill respectively.	nil
4j	Number of settling ponds	Ranichua waste dump-01, O.T. Hill waste dump- 01	Ranichua waste dump-04, O.T. Hill waste dump- 05	nil
4k	Specific comments of inspecting officer on waste dump management	-	-	No top soil generated and 2 dumps were operated/ active during the period.settling ponds, retaining wall and garland drain are maintain around the dumps.

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.	nil	nil	No working pit has been exhausted in respect of iron ore minerals hence backfilling and rehabilitation has not been done yet.
5b	Area under backfilling of mined out area	nil	nil	No working pit has been exhausted in respect of iron ore minerals hence backfilling and rehabilitation has not been done yet.
5c	Concurrent use of topsoil for restoration or rehabilitation of mineral out area (Rule 32)	nil	nil	No working pit has been exhausted in respect of iron ore minerals hence backfilling and rehabilitation has not been done yet.
5d	Total area fully reclaimed and rehabilitated	nil	nil	No working pit has been exhausted in respect of iron ore minerals hence backfilling and rehabilitation has not been done yet.
5e	General remarks of inspecting officers on backfilling and reclamation etc.	-	-	No working pit has been exhausted in respect of iron ore minerals hence backfilling and rehabilitation has not been done yet.

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).	Yes	yes	nil
6b	Area available for rehabilitation (ha) .	Nil	Nil	Nil
6c	afforestation done (ha).	1 ha.	2.4 ha	nil
6d	No. of saplings planted during the year	1200 nos	3435 nos	nil

6e	Cumulative no .of plants	11800 nos	14600 nos	nil
6f	Any other method of rehabilitation	no such proposal	nil	nil
6g	Cost incurred on watch and care during the year	nil	nil	nil
6h	Compliance on reclamation and rehabilitation by backfilling (i) Voids available for backfilling (Lx B x D	NA	NA	No void has been available for backfilling, as the mines are not yet fully developed up to the ultimate pit depth level.
6i	Compliance on reclamation and rehabilitation by backfilling (ii) Voids filled by waste / tailings	NA	NA	No void has been available for backfilling, as the mines are not yet fully developed up to the ultimate pit depth level.
6j	Compliance on reclamation and rehabilitation by backfilling (iii)Afforestation on backfilled area	NA	NA	No void has been available for backfilling, as the mines are not yet fully developed up to the ultimate pit depth level.
6k	Compliance on reclamation and rehabilitation by backfilling (iv) Rehabilitation by making water reservoir	no such proposal	nil	nil
6l	Compliance on reclamation and rehabilitation by backfilling (v)any other specific means.	no such proposal	nil	nil
6m	Compliance of rehabilitation of waste land within lease (i)afforestation	1200 nos	3535 nos	3535 nos of sapling planted over stablized/established dump

6n	Compliance of rehabilitation of waste land within lease (ii)Area rehabilitation (ha)	1 ha	2.4 ha	nil
6o	Compliance of rehabilitation of waste land within lease (iii)Method of rehabilitation	plantation	plantation	plantation is been carried out on established dump
6p	Compliance of environmental monitoring (core zone and buffer zone)	Compliance of Environmental monitoring at core zone & buffer zone are kept in proposal	Compliance of Environmental monitoring at core zone & buffer zone are done on quarterly basis	As per JSPCB quarterly and internal monthly monitoring is been done
6q	General remarks of inspecting officers on PMCP compliance and progressive closure operations etc.	-	-	No void has been available for backfilling, as the mines are not yet fully developed up to the ultimate pit depth level. as per JSPCB quarterly monitoring is being done for compliance of Environmental monitoring at core zone and buffer zone

Mineral Conservation:

Sl.No.	Item	Propasals	Actual work	Remarks
Environment:				
Sl.No.	Item	Propasals	Actual work	Remarks
8a	Separate removal and utilization of topsoil (Rule 32)	No such proposal	nil	There was no top soil
8b	Concurrent use or storage of topsoil	no such proposal	nil	There was no top soil

8c	Separate dumps for overburden, waste rock, rejects and fines (Rule 33)	Waste/ OB dump at O.T. Hill and Ranichua dump	Waste/ OB dump at O.T. Hill and Ranichua dump	Waste dump proposed in approved MRMP
8d	Use of overburden, waste rock, rejects and fines dumps for restoring the land to its original use	No such proposal	Nil	Working Pits have not been exhausted yet
8e	Phased restoration, reclamation and rehabilitation of lands affected by mining operations (Pits, dumps etc)	1200 nos of plantation proposed on OB dump (Ranichua dump & OT hill dump)	3435 nos have been planted	nil
8f	Baseline information on existence of plantation and additional plantation done (Rule 41)	1200 nos of plantation proposed on OB dump (Ranichua dump & OT hill dump)	3435 nos have been planted	nil
8g	Survival rate	70%	75%	nil
8h	Water sprinkling on roads to control airborne dust	Water sprinkling on roads to control airborne dust kept in proposal	Water is sprayed on roads to control airborne dust.	water sprinkling is done by fixed water sprinkler of 1.8 km and water tankers of 28KL capacity.
8i	General remarks of inspecting officer on aesthetic beauty in and around mines area	-	-	Mine is located on top of plateau in Saranda reserve forest surrounded by thick vegetation of mainly sal tree.

Compliance of Rule 45:

Sl.No.	Item	Propasals	Actual work	Remarks
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9a	Status of submission of Monthly and Annual returns	Monthly Return Submitted up to September-2023. Annual Return submitted for the FY 2022-23.	Monthly Return Submitted up to September-2023. Annual Return submitted for the FY 2022-23.	Monthly and annual return submitted on time
9b	Scrutiny of Annual return for information on Mining Engineer, Geologist and Manager	Mines manager: Shri S.P.DAS, Mining engineer: Shri C. N. Kumar, Geologist: Dr. T.C. Ananda	Mines manager: Shri S.P.DAS, Mining engineer: Shri N. Kumar, Geologist: Dr. T.C. Ananda	information found in order
9c	Scrutiny of Annual return on land use pattern for area under pits, reclaimed area, dumps etc.	Area Covered under current (O-C) Workings: 183 ha, Used for waste disposal: 22.65 ha, Occupied by plant, buildings, residential, welfare buildings and roads: 17.68 ha, Used for Fines Dump plus Afforestation: 53.16 ha,	information appears to be in order	nil
9d	Scrutiny of Annual return on afforestation	3435 nos have been planted within lease area (survival 75%), 165 nos have been planted outside lease area (survival 85%)	information appears to be in order	nil
9e	Scrutiny of Annual return on mineral reject generation (Grade and quantity)	No mineral rejects generated during reporting year	No mineral rejects generated during reporting year	nil

9f	Scrutiny of Annual return on ROM stock and/or graded ore	ROM Opening stock: 41908 T ROM closing stock: 41908 T ROM production: 3961310 T	information appears to be in order	nil
9g	Scrutiny of Annual return on sale value, Ex. Mine price and production cost	Rs. 2814.22 per tonne (cost of production)	information appears to be in order	nil
9h	Scrutiny of Annual return on fixed assets	Rs. 2368036677/-	information appears to be in order	nil
9k	Scrutiny of Annual return on mining machineries	Shovel (Hydraulic): 5, Dumper: 8, Dozer: 6, Water Tanker: 2, Wheel Loader: 1, Blast Host Drill: 4, Crane: 9, Winding Engine (Elec.): 1, Air Compressor: 6, Conveyor (Elec.): 13, Crusher: 4, Back Hoe: 3, Generator (Diesel): 2, Motor Grader: 2, Pumps (Elec.): 4	information on machineries appears to be in order	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 :

(PHILLIP HAPADGARA)

Indian Bureau of Mines