



TSL/KAM/ 006 /FY24

Date: 28-09-2023

To,
The Member Secretary,
Odisha State Pollution Control Board,
Paribesh Bhawan,
A/118, Nilakantha Nagar, Unit-VIII,
Bhubaneswar-751012

Subject: Submission of Environmental statement in FORM-V for the year ending 31st March 2023 in respect of Kamarda Chromite Block of M/S Tata Steel Ltd.

Reference: Rule-14 under Environmental (Protection) Amendment Rule, 1993 (G.S.R 386, 22.04.1993)

Dear Sir,

We are hereby submitting the Annual Environmental Statement in "FORM-V" prescribed under the provisions of above referenced statute, in respect of Kamarda Chromite Block of M/S Tata Steel Ltd., At- Kamarda, Po- Kalarangiatta, Dist- Jajpur, Odisha, for the year ending 31st March 2023. A copy of the annual return (annual return submitted to IBM, Govt. of India/Directorate of Mines, Govt. of Odisha) is also attached as Annexure-I.

This is for your kind information and perusal please. Receipt of the same may please be acknowledged.

Thanking You.

Yours faithfully,

f: Tata Steel Limited

Mines Manager,
Kamarda Chromite Block

- Copy to:** 1. Regional Officer, SPCB, Kalinganagar, Dhabalagiri Chowk, Jajpur Road
(Odisha)
2. Integrated Regional Office, MoEF&CC, A/3, Rail Vihar, Chandrasekharpur,
Bhubaneswar-751023

TATA STEEL LIMITED

Ferro Alloys & Minerals Division Kamarda Chromite Mine Kansa Jajpur Odisha 755 028

Registered Office Bombay House 24 Homi Mody Street Fort Mumbai 400 001 India

Tel +91 22 6665 8282 Fax +91 22 6665 7724

Corporate Identity Number L27100MH1907PLC000260 Website www.tatasteel.com



Environmental Statement

Form – V (FY 2022 – 23)

For

Kamarda Chromite Block

Submitted By:

Kamarda Chromite Block

M/s. Tata Steel Limited

**At: Kamarda, Po: Kalarangiatta, Block-Sukinda
District- Jajpur, Odisha -755028**

FORM-V

(See Rule 14)

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE
31st MARCH 2023****KAMARDA CHROMITE BLOCK, M/s. TATA STEEL LIMITED.****PART-A**

i.	Name and address of the owner / occupier of the industry operation or process.	:	Mr. Pankaj Kumar Satija (Managing Director) M/s. Tata Steel Mining Limited, Plot No. N3/24, IRC Village, Nayapalli, Bhubaneswar, Odisha – 751 015
ii.	Industry category Primary - (STC code) Secondary - (SIC Code)	:	Primary (SIC): 1000 (Metal Mining) Secondary (SIC): 1060 (Ferro Alloy Ore)
iii.	Production capacity - Units.	:	0.088 MTPA (Chromite Ore)
iv.	Year of establishment.	:	2020
v.	Date of the last Environmental Statement submitted.	:	29.09.2022

PART-B**Water and Raw Material Consumption****A. Water Consumption for FY 2022-23 (April'2022 to March'2023)**

Sl. No	Heads of Consumption	Water consumption (m ³)	Water consumption (m ³ /day)	Water consumption (m ³)	
				During Previous FY (2021-22)	During Current FY (2022-23)
		2021-22	2021-22	2022-23	2022-23
01	Process				
	Water sprinkling in the mine pit and haul road	22742	74.32	36900	120
	Plantation	264	0.86	1023.6	3.33
	Equipment & Vehicle washing	35	0.11	120	0.39
02	Cooling	Nil	Nil	Nil	Nil
03	Domestic				
	Drinking Purpose	14651	40.14	12851	41.86
04	Total Consumption	37692	115	50895	166

**Note: In case of mining operation, the water requirement is for dust suppression, plantation & washing of vehicle which has been taken as process consumption of water, which was consumed from ETP treated water.*

B. Specific Water Consumption – (April'2022 to March 2023)

(i) Process water consumption per unit of product output

Name of the Product	Production (MT)	Water consumption per unit of production*
Chrome Ore (ROM)	87955	0.58 KL/MT

(ii) Raw Material Consumption

The materials consumed during the previous and current financial year are in consumable and supportive ads in nature. The materials which are required to produce Chrome ore from mine quarry are given below:

Name of material	Name of products	Consumption of material per unit of output	
		During previous financial year (2021-22)	During present financial year (2022-23)
Diesel	Chrome Ore (ROM)	9.55 Ltrs./ MT	8.72 Ltrs./ MT
Gas (LPG)		Nil	Nil
Lubricant oil		0.033 Ltrs./ MT	0.20 Ltrs./ MT
Grease		0.009 Kg/ MT	0.015 Kg/ MT
Electricity		17.622 KWH/ MT	21.87 KWH/ MT
Explosives		0.165 Kg/MT	1.54 Kg/MT

PART-C

{POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT}

(Parameters as specified in the consent issued)

a. Water

Sl. No.	Parameters	Unit	Result Average	Maximum Permissible Standard	Variation from the prescribed standard (%)	Remarks for the deviations if any
1.	pH	--	7.51	5.5 -9	0.0	Within the prescribed limit
2.	Suspended Solids	mg/ltr	15-25	100	-85 to -75	Within the prescribed limit
3.	Oil & Grease	mg/ltr	BDL	10	BDL	Not Detected in any of the samples.
4.	BOD (3) days at 27°C	mg/ltr	ND	30	-100	Below detection limit.
5.	COD	mg/ltr	ND	250	-100	Below detection limit
6.	Hexavalent Chromium as Cr +6	mg/ltr	BDL	0.05	BDL	Below detection limit

Environmental Statement for the Financial Year Ending 31st March, 2023

7.	Total Chromium as Cr	mg/ltr	0.010-0.020	2.0	-99 to -90	Detected only in few samples
8.	Nickel as Ni	mg/ltr	BDL	3	BDL	Below detection limit
9.	Iron as Fe	mg/ltr	BDL	3	BDL	Below detection limit

BDL: Below Detection Limit

b. Air

Monitoring Locations	Parameters (Unit)	Results Annual Averages	Prescribed Standards Annual Average (NAAQS-2009)	Prescribed Standards 24hr Average (NAAQS-2009)	Variations from prescribed standards (%) (variation w.r.t annual average)	Reasons for variations from standard value
Office Gate	PM ₁₀ (µg/m ³)	62.92	60	100	4.9% higher	Below the 24hr average, but higher than the annual average standard
	PM _{2.5} (µg/m ³)	35.36	40	60	11.6% lower	Below the annual prescribed standard
	SO ₂ (µg/m ³)	4.91	50	80	90.18% lower	
	NO _x (µg/m ³)	7.05	40	80	82.37% lower	
	CO (mg/m ³)	0.18	N/A	4	N/A	Annual average standard not prescribed in NAAQS-2009
COB Plant	PM ₁₀ (µg/m ³)	64.13	60	100	6.88% higher	Below the 24hr average, but higher than the annual average standard
	PM _{2.5} (µg/m ³)	36.02	40	60	9.95% lower	Below the annual prescribed standard
	SO ₂ (µg/m ³)	5.02	50	80	89.96% lower	
	NO _x (µg/m ³)	6.49	40	80	83.77% lower	
	CO (mg/m ³)	0.18	N/A	4	N/A	Annual average standard not prescribed in NAAQS-2009
ETP Top	PM ₁₀ (µg/m ³)	63.39	60	100	5.65% higher	Below the 24hr average, but higher than the annual average standard
	PM _{2.5} (µg/m ³)	35.68	40	60	10.8% lower	Below the annual prescribed standard
	SO ₂ (µg/m ³)	4.6	50	80	90.8% lower	

Environmental Statement for the Financial Year Ending 31st March, 2023

	NOx ($\mu\text{g}/\text{m}^3$)	5.3	40	80	86.75% lower	
	CO (mg/m^3)	0.16	N/A	4	N/A	Annual average standard not prescribed in NAAQS-2009
Near AB Dump	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	63.66	60	100	6.1% higher	Below the 24hr average, but higher than the annual average standard
	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	35.64	40	60	64.36% lower	Below the annual prescribed standard
	SO ₂ ($\mu\text{g}/\text{m}^3$)	3.7	50	80	92.6% lower	
	NOx ($\mu\text{g}/\text{m}^3$)	2.4	40	80	94% lower	
	CO (mg/m^3)	0.12	N/A	4	N/A	Annual average standard not prescribed in NAAQS-2009

PART-D

HAZARDOUS WASTAGES

(As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016)

Hazardous Waste	Total Quantity	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
(a) From process		
Used/Waste Oil	5.57 KL	4.78 KL
Oil Contamination Waste	21.3 Kg	26.8
Oil Filters & filter Materials	133 Nos.	225
ETP Sludge	0.6 Ton	14.1 Ton
(b) From pollution control facilities	Nil	Nil

PART-E

Solid Waste

	Solid Waste	Total Quantity (MT)	
		During the current financial year (2021-22)	During the current financial year (2022-23)
(a)	From process (Overburden)	809949	352027
(b)	From pollution control facility	Nil	Nil

(c)	(1) Quantity recycled or re-utilized within the unit	Nil	Nil
	(2) Sold	Nil	Nil
	(3) Disposed	Nil	Nil

PART-F

[Please specify the characterization (in terms of composition and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both the categories of wastes.]

The details composition and characteristics of solid and hazardous waste are given below

Sl. No	Waste Description	Nature of Waste	Composition/ Characteristics	Quantity (2022-23)	Management (Methods of collection and Disposal)
1	Overburden Material	Non-Hazardous (Solid waste)	Quartzite, Laterites, Lateritic soil, Talc schist and serpentine, Nickeliferous limonite	352027 Tones	The waste material is dumped in non-mineralized area approved by IBM with all environmental protection measures
2	Used /Waste oil	Hazardous Waste (HW-5.1)	Lead, Arsenic, Cadmium, Chromium, Nickel, PAHs etc.	4.78 KL	Collected and securely stored inside 200Ltr MS Barrels and stored above concrete flooring. Sold to M/s Swaraj Lubricants, authorized by SPCB.
3	Oil contaminated waste	Hazardous waste (HW-5.2)	Consists of oil contaminated cotton, Jute, soaked sand etc.	26.8 Kg	Collected and stored in MS Barrels above concrete flooring for large quantity disposal to authorized agency
4	ETP sludge	Hazardous Waste (HW-34.3)	Composition of Cr, Fe, Al, Si etc.	14.1 Ton	ETP sludge will be disposed through Ramky Enviro Engineers Limited Jajpur (known as CHWTSDF)

PART-G

[Impact of the pollution measures taken on conservation of natural resources and on the cost production]

a) Dust Suppression

- Regular water spraying is being carried out on mine haul road, working site, waste dump yard, ore stack yard loading and unloading points by water tankers to reduce the dust levels.
- 500 mtrs of fixed water sprinkler is installed in main haul road.
- Regular water sprinkling on mineral transportation roads passing through the habitation area as well as other strategic point is being done regularly.
- Wet drilling is a common practice during drilling operation to reduce air pollution.
- Pre- wetting of blasting site and controlled blasting is being practiced reducing dust generation.
- The mineral transportation is being carried out by trucks covered with tarpaulin and properly sealed.
- No trucks are being overloaded at any point of time to avoid spillage Ore and OB in the haul road.

b) Management of surface run - off & mine discharge water

- All the surface run-off water from one side of the quarry during rainy seasons is allowed to channelize through well maintained garland drains having sedimentation pits. Finally, the surface run-off accumulated at Quarry "1&2" for ground water recharge. Effluent Treatment Plant is constructed for the treatment of excess surface run-off from Quarry 1&2.
- Further, at the other side of the quarry the surface run-off has been properly channelized to a big sump from where the whole water has been diverted to Quarry 3&4.
- From the quarry, water is pumped to an effluent treatment plant for detoxification of Cr⁺⁶ and reduces the Total Suspended Solids (TSS) before any use or discharge.

c) Solid waste management

- ❖ Overburden/waste rock is being dumped in the earmarked dump area approved by IBM with suitable terracing. The terraces are stabilized and rehabilitated by massive plantation.
- ❖ Retaining walls have been constructed at the toe of various OB dumps to arrest the flow solid material. Garland drains are constructed in and around the OB dumps for drainage of surface run-off.
- ❖ Settling pits and check dams inside the garland drain have been constructed to arrest the slit/ soil particles in the water. Yearly twice, the settling pits and garland drains have been desilted.

d) Environmental monitoring.

- ✓ Regular monitoring of ambient air quality is being carried out at four appropriate locations in core zone and in four locations in buffer zone as per statue.
- ✓ Regular monitoring of Ground water level is being carried out by the installed Piezometric bore wells inside mine lease area.

e) Afforestation

- About 2.18ha of Dump plantation was completed in FY 2022-23. About 5459 local samplings are planted in dump for more survival rate with tree density of 2500 per hectare.

f) Noise reduction

- Heavy vehicles operating in mines have good noise control system. Silencers are maintained in good conditions.
- Regular maintenance of the vehicles/ machines is carried out to reduce the noise pollution.
- Controlled blasting is generally practiced minimizing the noise.
- Regular noise level monitoring is being done on monthly basis and the results are found below permissible limit.

g) Medical facilities and health monitoring

- ❖ All the employees undergo periodical medical checkup like IME & PME.
- ❖ M/s. Utkal polytechnic an occupational checkup health center at Bhubaneswar is periodically conducting initial and periodical examination of the persons working in the project regularly which is recognized by DGMS, Dhanbad.
- ❖ A first-aid facility is established at Saruabil Mines to cater for local community and employee of Saruabil & Kamarda mines.

h) ENVIRONMENTAL EXPENDITURE MADE DURING April - 2022 TO March- 2023

Sl. No.	Expenditure	Amount (In Lakh)
1	ETP operation cost	
	a) Manpower	23.56
	b) ETP Electricity cost	15.68
	c) Chemical cost & Maintenance	12.86
	d) Calibration & Maintenance of sensors & RT-DAS system	5.68
2	Water sprinkling cost for haul road management	11.27
3	Display of Board (Env. Management)	0.645
4	Monitoring & Analysis cost of Air, Water & Noise	22.43
5	Plantation expenditure	10.1
6	Ground Water Level Measurement & Data Transmission	1.64
	Total	103.87

PART-H

[Additional measures/investment proposal for environmental protecting including abatement of pollution, preservation of pollution]

1. Regular maintenance of retaining wall around the foot of the dumps will be provided.
2. More garland drain shall be constructed and maintained all along the dump to channelize the water in a single point of storage as per approved mining plan.
3. One CETP(@1200KL/hr) is planned to construct at Saruabil mines to treat the both mines seepage water and surface run-off water.
4. More fixed sprinklers will be provided to control the haul road dust.
5. For the stability of the dumps regular slope monitoring is done by précised Total Station Equipment.
6. We are engaging consultant from premier institute to study the dump and mines slope stabilities.

PART-I

Any other particular for improving the quality of the environment:

The management of Tata Steel Mining is committed for prevention of the pollution inside and surrounding the lease hold area. Environmental monitoring is being done in core & buffer zones of the lease area to ascertain & to take preventive measure to keep the parameters within stipulated norms.

Environmental Management Practices



Waste dump management with Retaining wall and Garland drain construction



Waste dump plantation in FY 2022-23



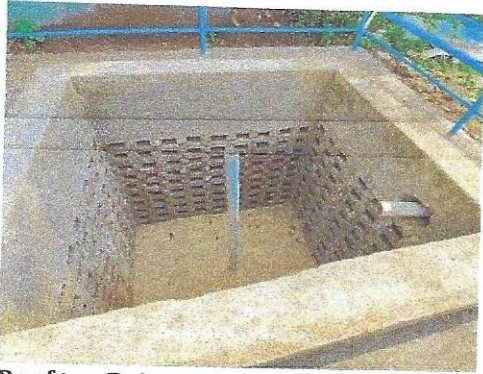
Water sprinkling through movable water tanker & Fixed Sprinkler



Vehicle washing with Oil & Grease separation pit



Hazardous storage area



Roof top Rainwater Harvesting Structures constructed for Ground Water Recharge

[Handwritten signature]

Mines Manager

Kamarda Chromite Block

M/s. Tata Steel Limited.



TSML/ KAM / 6141 / FY24
Date: 01-07-2023

To,
The Regional Controller of Mines,
Indian Bureau of Mines,
Bhubaneswar Region
Plot No. 149, Pokhariput
Bhubaneswar- 751020.

Sub: Submission of Annual Return in Form – G1 along with Surface Plan and Geological Plan & Sections for the Financial Year 2022-23 in respect of Kamarda Chromite Mine, M/s Tata Steel Mining Limited.

Dear Sir,

We are submitting herewith the Annual Return in Form – G1 along with Surface Plan and Geological Plan & Sections for the Financial Year 2022-23 in respect of Kamarda Chromite Mine, M/s Tata Steel Mining Limited.

This is for your kind information & needful Please.

Thanking you,
Yours Sincerely,

Mine Manager
Kamarda Chromite Mine
M/s Tata Steel Mining Limited.

Encl: As above.

TATA STEEL MINING LIMITED

(Formerly known as T S Alloys Limited)

Registered Office Plot No N3/24 IRC Village Nayapalli Bhubneshwar Odisha Pin 751015 Ph +91 674 2551045
Sukinda Chromite Mine PO Kalarangiatta District Jajpur Odisha Pin 755028
CIN U27109OR2004PLC009683 Website www.tsalloys.com

FORM G-1

[See rule 45(5)(c)(i)]

For the financial Year 1st April, 2022 to 31st March, 2023**ANNUAL RETURN**

[To be used for minerals other than Copper, Gold, Lead, Pyrites, Tin, Tungsten, Zinc and precious and semi-precious stones]

To

- (i) The Regional Controller of Mines
Indian Bureau of Mines
Bhubaneswar Region,
PIN:

(Please address to Regional Controller of Mines in whose territorial jurisdiction the mines falls as notified from time to time by the Controller General, Indian Bureau of Mines under rule 66 of the Mineral Conservation and Development Rules, 2017)

- (ii) The State Government of Odisha

PART - I (General)

1. Details of Mine:	
(a) Registration number allotted by Indian Bureau of Mines (to give registration number of the Lessee-Owner)	IBM/5765/2011
(b) Mine Code (allotted by Indian Bureau of Mines)	11ORI19029
(c) Name of the Mineral	CHROMITE
(d) Name of Mine	KAMARDA CHROMITE MINE
(e) Name(s) of other mineral(s), if any, produced from the same mine	
2. Location of the Mine :	
Village	KAMARDA
Post Office	KALARANGIATTA
Tahsil-Taluk	KALIAPANI
District	JAJAPUR
State	ODISHA
PIN Code	755028
Fax No. :	00000000000
Phone No. :	7077686456
E-mail:	dibyendu.behera@tatasteelmining.com
Mobile:	7077686456

3. Name and address of Lessee-Owner (along with fax no. and e-mail):	
Name of Lessee-Owner	M/s. Tata Steel Mining Limited
Address	N-3/24IRC VILLAGE, NAYAPALLI, Bhubaneswar
District	KHORDHA
State	ODISHA
PIN Code	751015
Fax No. :	00000000000
Phone No. :	06742551045
E-mail:	mdoffice@tatasteelmining.com
Mobile:	8092084533
4. Registered Office of the Lessee:	N3/24, IRC village, Nayapalli, Bhubaneswar-751015
5. Director in charge :	Mr. Pankaj Kumar Satija
6. Agent :	Mr. Bibhudutta Mohanty
7. Manager :	Mr. Dibyendu Behera
8. Mining Engineer in charge:	Mr. Dibyendu Behera
9. Geologist in charge :	Mr. Rajkumar Gandhi
10. Transferor (previous owner), if any, and date of transfer:	MS B.C. Mohanty and Sons Pvt. Ltd 26/06/2020

Uploaded Document

Upload PMCP Table in Excel: [PMCP_Kamarda.xlsx](#)

Upload UAV Survey (KML/KMZ File) : [PMCP_Landuse_Kamarda_Y2022-23.kml](#)

11. Particulars of area operated-Lease

(Furnish information on items (i) to (vi) lease-wise in case mine workings cover more than one lease)

Lease - 1	
(i) Lease number allotted by the State Government	061304569302
(ii) Area under lease (hectares):	
Under Forest	105.780 hectares
Outside Forest	1.460 hectares
Total	107.240 hectares
(iii) Date of execution of mining lease deed	26/06/2020
(iv) Period of lease	50
(v) Area for which surface rights are held (hectares)	
Under Forest	88.068 hectares
Outside Forest	0.000 hectares
Total	88.068 hectares
(vi) Date and period of renewal (if applicable)	0

(vii) In case there is more than one mine in the same lease area, indicate name of mine and mineral produced	Mine Name	Mine Code	Mineral Name
	--	--	--

12. Lease area (surface area) utilisation as at the end of year (hectares):	Under forest	Outside forest	Total
(i) Already exploited and abandoned by opencast (O-C) mining	0.000	0.000	0.000
(ii) Covered under current (O-C) Workings	36.367	0.000	36.367
(iii) Reclaimed-rehabilitated	0.000	0.000	0.000
(iv) Used for waste disposal	35.507	0.000	35.507
(v) Occupied by plant, buildings, residential, welfare buildings and roads	3.455	0.003	3.458
(vi) Used for any other purpose (specify) Green Belt, Nala, Safety Zone, etc.	30.451	1.457	31.908
(vii) Work done under progressive mine closure plan during the year	2.180	0.000	2.180
13. Ownership-exploiting Agency of the mine: (Public Sector-Private Sector-Joint Sector)	Private Sector		

PART-II (Employment and Wages)

1. Number of supervisory staff employed at the mine		
Description	Wholly employed	Partly employed
(i) Graduate Mining Engineer	6	0
(ii) Diploma Mining Engineer	10	0
(iii) Geologist	1	0
(iv) Surveyor	2	0
(v) Other administrative and technical supervisory staff	17	0
Total:	36	0
2. (i) Number of days the mine worked: 307		
(ii) No. of shifts per day: 3		
(iii) Indicate reasons for work stoppage in the mine during the year (due to strike, lockout, heavy rain, non-availability of labour, transport bottleneck, lack of demand, uneconomic operations, etc.) and the number of days of work stoppage for each of the factors separately .	Reasons	
	Weekly off	39
	Holidays	19

3. Employment and salary-wages paid #:

Maximum number of persons employed on any one day during the year:								
(i) In workings below ground on (date) _____ (a) (number) 0								
(ii) In all in the mine on (date) 01/12/2022 (a) (number) 195								
Classification	Total number of man days worked during the year			No. of days worked during the year	Average daily number of persons employed			Total Wages - Salary for the year (₹)
	Direct	Contract	Total		Male	Female	Total	
(1)	2(A)	2(B)	2(C)	(3)	4(A)	4(B)	4(C)	(5)
Below Ground	0	0	0	0	0	0	0	0.00
Opencast	5782	50527	56309	307	183	0.4	183.4	39569259.00
Above Ground	0	13201	13201	307	42	1	43	7987973.00
Total:	5782.0	63728.0	69510.0	307.000	225.0	1.4	226.4	47557232.00

To include all employees exclusive to the mine and attached factory, workshop or mineral dressing plant at the mine site

PART-II A (Capital Structure)

1. Value of Fixed Assets* (₹ 214543080)						
(in respect of the mine, beneficiation plant, mine work-shop, power and water installation)						
In case this information is furnished as combined information in another mine's return please specify Mine Code-Mine Name:						
Mine Name	Mine Code		Mineral Name			
--	--		--			
Description	At the beginning of the year (₹)	Additions during the Year (₹)	Sold or discarded during the year (₹)	Depreciation during the year (₹)	Net closing Balance (₹) (2+3)-(4+5)	Estimated market value** (₹)
1	2	3	4	5	6	7
(i) Land***	0	0	0	0	0	0
(ii) Building:						
Industrial	13626632	0	0	573560	13053072	0
Residential	5347513	0	0	92199	5255314	0
(iii) Plant and Machinery including transport equipment	20845370	0	0	1126777	19718593	0
(iv) Capitalised Expenditure such as pre-production exploration, development, major overhaul and repair to machinery etc. (As prescribed under Income Tax Act)	180258492	0	0	3742391	176516101	0
Total:	220078007	0	0	5534927	214543080	0

* In case the fixed assets are common to more than one mine, furnish combined information for all such mines together in any one of the mine's return. In the returns for other mines, give only a cross reference to the particular mine's return where-in the information is included.

** Optional and may be furnished in respect of items (i), (ii) and (iii) if the mine owner desires.

*** Including any non-recurring expenditure incurred on the acquisition of land.

2. Source of Finance (at the end of the year) :		
(i) Paid up Share Capital (₹)	0	
(ii) Own Capital (₹)	0	
(iii) Reserve and Surplus (All Types)(₹)	0	
(iv) Long Term loans outstanding (#)(₹)	0	
0	0	0
Name of the Institution-Source	Amount of Loan (₹)	Rate of Interest
0	0	0

(#) Indicate the names of the lending institutions such as State Finance Corporation, Industrial Development and other Public Corporations, Co-operative Banks, Nationalised Banks and other sources along with the amount of loan from each source and the rate of interest at which loan has been taken.

3. Interest and Rent (₹)	
(i) Interest paid during the year	0
(ii) Rents (excluding surface rent) paid during the year	0

PART-III (Consumption of Materials)

1. Quantity and cost of material consumed during the year			
Description	Unit	Quantity	Value (₹)
(i) Fuel			
(a) Coal	Tonnes	0	0
(b) Diesel Oil	Ltrs.	767000	75851168
(c) Petrol	Ltrs.	0	0
(d) Kerosene	Ltrs.	0	0
(e) Gas	Cu.M	0	0
(ii) Lubricant			
(a) Lubricant oil	Ltrs.	17387	3074693
(b) Grease	Kgs.	1304	446851
(iii) Electricity			
(a) Consumed	Kwh	1923331	13268193
(b) Generated	Kwh	63960	31980
(c) Sold	Kwh	0	0
(iv) Explosives (furnish full details in Part IV)			12835812
(v) Tyres	Nos.	167	4618981
(vi) Timber and Supports			0
(vii) Drill rods and kits	Nos.	4	199200
(viii) Other spares and stores			12111885

2. Royalty, Rents and Payments made to DMF and NMET (₹):		
	Paid for current year	Paid towards past arrears
(a) Royalty	62849370	8830074
(b) Dead rent	43249	0
(c) Surface rent	1504504	0
(d) Payment made to DMF	6314920	721272
(e) Payment made to NMET	1263001	144242
3. Compensation paid for felling trees during the year (₹)		91003
4. Depreciation on fixed assets (₹)		5534927

5. Taxes and cesses		
	Amount in Rupees paid during the year to:	
	Central Govt.	State Govt.
(i) Sales Tax	73237478	63378553
(ii) Welfare cess	0	0
(iii) Other taxes and cesses:-		
(a) Mineral cess	0	0
(b) Cess on dead rent	0	0
(c) Others (please specify) Application Fees, Surface Rent, User Fees, Weighment Charges, ED	0	2590399
6. Other expenses (₹):		
(i) Overheads		22982242
(ii) Maintenance		0
(iii) Money value of other benefits paid to workmen		0
(iv) Payment made to professional agencies		0

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PART-IV (Consumption of Explosives)

Licensed capacity of magazine: (specify unit separately in kg-tonne, numbers, metres)		Item	Unit	Capacity	
		Explosives	Kg.	0	
		Detonators	No.s	0	
		Fuses	Mts	0	
Classification of Explosives	Unit	Quantity consumed during the year		Estimated requirement during the next year	
		Small dia. (upto 32 mm)	Large dia. (above 32 mm)	Small dia. (upto 32 mm)	Large dia. (above 32 mm)
1. Gun Powder	Kg.	0		0	
2. Nitrate Mixture					
a. Loose ammonium nitrate	Kg.	0	0	0	0
b. Ammonium nitrate in cartridge form	Kg.	0	0	0	0
3. Nitro compound	Kg.	0	61750	0	102931
4. Liquid Oxygen soaked cartridges	Kg.	0	0	0	0
5. Slurry explosives (Mention different trade names) SME	Kg.	346	73630	1170	137241
6. Detonators					
i) Ordinary	No.s	0		0	
ii) Electrical					
(a) Ordinary	No.s	202		446	
(b) Delay	No.s	0		0	
7. Fuse					
(a) Safety Fuse	Mts	0		0	
(b) Detonating Fuse	Mts	0		0	
8. Plastic ignition cord	Mts	0		0	
9. Others (specify) NONEL	Meters	5963		8000	

Different sizes of soaked liquid oxygen cartridges to be reported in equivalent kg. as per manufacturer's instruction.

PART-V (General Geology & Mining)

(Items 2 and 3 to be submitted separately for each mineral)

1. Exploration

1(i) Exploration activities during the year:

		At the beginning of the year	During the year	Cumulative	Grid spacing-Dimension
Drilling	No of holes	15	9	24	50X50and100X100
	Metrage	745	1557	2302	50X50and100X101
Pitting	No of pits	0	0	0	0
	Excavation (in m ³)	0	0	0	0
Trenching	No of trenches	0	0	0	0
	Excavation (in m ³)	0	0	0	0
	Length covered (in metre)	0	0	0	0
Expenditure on exploration (₹)		3574560	10156311	13730871	0

1(ii). Any other exploration activity during the year: Nil

2. Reserves and Resources estimated (in tonnes) (CHROMITE).

Classification	Code	At the beginning of the year 1.4.2022 as per latest approved mining plan- scheme	Assessed during the year	Depletion of reserves during the year	Balance resources as on 31.3.2023
(1)	(2)	(3)	(4)	(5)	(6)= (3+4-5)
A. Mineral Reserve					
1. Proved Mineral Reserve	111	1593863.75	0	87955	1505908
2. Probable mineral Reserve	121	0	0	0	0
	122	0	0	0	0
3. Total Reserves		1,593,863.75	0.00	87,955.00	1,505,908.00
B. Remaining Resources					
1. Feasibility mineral Resource	211	578610	0	0	578610
2. Prefeasibility mineral resource	221	0	0	0	0
	222	0	0	0	0
3. Measured mineral resource	331	0	0	0	0
4. Indicated mineral resource	332	0	0	0	0
5. Inferred mineral resource	333	0	0	0	0
6. Reconnaissance mineral resource	334	0	0	0	0
7. Total remaining Resources		578,610.00	0.00	0.00	578,610.00
Total (A+B)		2,172,473.75	0.00	87,955.00	2,084,518.00

3. Subgrade-Mineral Reject (in tonnes) (CHROMITE)

(Information to be given in respect of mineral fractions generated and stacked- dumped below cut-off grade and above threshold value, if prescribed, having no immediate sale value)

Generation of subgrade-mineral reject (in tonnes)	At the beginning of the year	Generated during the year	Disposed during the year	Total stacked at the end of the year	Average grade of the mineral reject generated
from unprocessed ore	0	0	0	0	0
from processed ore	0	0	0	0	0

4. Overburden and Waste (in m³)

(Information to be given in respect of overburden- waste and mineral fractions generated below threshold value, if prescribed)

At the beginning of the year	Generated during the year	Disposed in dumps during the year	Backfilled during the year	Total at the end of the year
439151	352027	352027	0	791178

5. Trees planted- survival rate

Description	Within lease area	Outside lease area
i) Number of trees planted during the year	5459	0
ii) Survival rate in percentage	75	0
iii) Total no. of trees at the end of the year	5459	0

6. Type of Machinery: Give the following information for the types of machinery in use such as hoist, fans, drills, loaders, excavators, dumpers, haulages, conveyors, pumps, etc.

Type of machinery	Capacity of each type of machinery	Unit (in which capacity is reported)	No. of machinery	Electrical Non-electrical (specify)	Used in opencast underground (specify)
DOZER	200.000	HP	1	Non Electrical	Opencast
ROCK DRILL (NON-ELEC.)	110.000	MM	1	Non Electrical	Opencast
SHOVEL (HYDRAULIC)	3.100	CUM	1	Non Electrical	Opencast
SHOVEL (HYDRAULIC)	0.090	CUM	1	Non Electrical	Opencast
MOTOR GRADER	196.000	HP	1	Non Electrical	Opencast
TIPPER	19.500	CUM	6	Non Electrical	Opencast
WATER TANKER	15000.000	LITRE	1	Non Electrical	Opencast
PUMPS (ELEC.)	6633.000	L/MN	4	Electrical	Opencast
ELEC. MOTOR	120.000	HP	1	Electrical	Opencast
ELEC. MOTOR	40.000	HP	2	Electrical	Opencast
ELEC. MOTOR	175.000	HP	1	Electrical	Opencast

7(i) Details of mineral Treatment Plant, if any (CHROMITE): Give a brief description of the process capacity of the machinery deployed and its availability. (Submit Flow Sheet and Material Balance of the Plant separately).

NIL

(ii) Furnish following information:

Item		Tonnage	Average Grade
Feed:		0	0
Concentrates-processed products :	(mention name)	0	0
By-products-Co-products:	(mention name)	0	0
Tailings:		0	0

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PART-VI (PRODUCTION, DESPACHES AND STOCKS) (CHROMITE)

(To be submitted separately for each mineral)

(Unit of Quantity in Tonnes)

1. Type of ore produced:

(Applicable for Iron ore only; tick mark whichever is applicable)

2. Production and Stocks of ROM ore at Mine-head

Category	Opening stock	Production	Closing stock
(a) Open Cast workings	0.000	87955.388	0.000
(b) Underground Workings	0.000	0.000	0.000
(c) Dump workings	0.000	0.000	0.000

3(i) Grade-wise ROM ore despatches from mine head (\$):

Grade of ROM	Despatches from mine-head	Ex-mine Price (₹)
(a) Below 40% Cr2O3 ROM	0.000	0.00
(b) 40% to below 52 % Cr2O3 ROM	0.000	0.00
(c) 52% and above Cr2O3 ROM	0.000	0.00

(\$): Applicable for iron ore and chromite only. For other minerals data of despatches to be reported in 3(ii)

3(ii) Grade-wise Production, Dispatches, Stocks and Ex-mine prices:

Grades**	Opening stock at mine-head	Production	Despatches from mine-head	Closing stock at mine-head	Ex-mine price (₹-Tonne)
(i) Lumps					
(a) Below 40% Cr2O3	0.000	8280.000	2077.950	6202.050	14970.00
(b) 40% to below 52 % Cr2O3	0.000	0.000	0.000	0.000	0.00
(c) 52% and above Cr2O3	0.000	0.000	0.000	0.000	0.00
(ii) Fines					
(a) Below 40% Cr2O3	53495.462	79675.388	62784.820	70386.030	5325.48
(b) 40% to below 52 % Cr2O3	0.000	0.000	0.000	0.000	0.00
(c) 52% and above Cr2O3	0.000	0.000	0.000	0.000	0.00
(iii) CONCENTRATES					
(a) CONCENTRATES	0.000	0.000	0.000	0.000	0.00

3(iii) In case the mineral is being pulverized in own factory, please give the following particulars (*):

Grade**	Total quantity of mineral Pulverized (in tonnes)	Total quantity of pulverized mineral produced (for each mesh size)		Total Quantity of pulverized mineral sold during the month		
		Mesh size	Quantity (tonne)	Mesh size	Quantity (tonne)	Ex-factory Sale value (₹)

3(iv) Average cost of pulverization (*) : ₹ per tonne

(*): Not applicable for Iron ore, Manganese ore, Bauxite and Chromite

4. Details of deductions made from sale value for computation of Ex-mine price (₹- Tonne)

Deduction claimed #	Amount (in ₹- Tonne)	Remarks
(a) Cost of transportation (indicate loading station and distance from mine in remarks)	0.00	NA
(b) Loading and unloading charges	0.00	NA
(c) Railway freight, if applicable (indicate destination and distance)	0.00	NA
(d) Port Handling charges- export duty (indicate name of port)	0.00	NA
(e) Charges for sampling and analysis	0.00	NA
(f) Rent for the plot at Stocking yard	0.00	NA
(g) Other charges (specify clearly)	0.00	NA
Total (a) to (g)	0.00	

Not applicable for captive dispatches and ex-mine sales

5. Sales- Despatches effected for Domestic Purposes and for Exports:

Grade	Nature of Despatch (indicate whether Domestic Sale or Domestic Transfer or Captive consumption or Export)	For Domestic Purposes				For export		
		Registration number as allotted by the Indian Bureau of Mines to the buyer ##	Consignee name ##	Quantity	Sale value (₹)	Country	Quantity	F.O.B Value (₹)
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/22792/2019	A3 MINERALS AND METAL EXPORT PRIVATE LIMITED	247.730	1226263.50			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/4178/2011	ANAND EXPORTS	18004.280	88952778.22			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/21641/2017	ARRK FERRO ALLOYS LLP	294.380	1159571.65			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/62/2011	BALASORE ALLOYS LIMITED	579.470	3346099.39			

Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/62/2011	BALASORE ALLOYS LIMITED	5672.260	29753392.79			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/538/2011	JAI BALAJI INDUSTRIES LIMITED	3439.350	16819580.68			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/5583/2011	K L RESOURCES PVT. LTD.	5460.120	28067075.43			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/318/2011	METSIL EXPORTS PRIVATE LIMITED	4949.180	24295765.37			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/4197/2011	Misrilall Mines Pvt. Ltd.	1791.110	8793266.85			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/44290/2021	PRABAL	999.890	4982451.87			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/93/2011	ORISSA CHROME EXPORT & MINING COMPANY LIMITED	5061.370	24512488.93			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/21253/2017	PJ MINERALS INTERNATIONAL PVT LTD	496.080	2455596.00			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/19350/2015	Prime Industries	979.400	5222520.05			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/765/2011	RASHMI CEMENT LIMITED	2969.860	13656457.71			
Below 40% Cr2O3,Fines	DOMESTIC SALE	IBM/6211/2011	Shree Monolithics Private Limited	446.440	2209878.00			
Below 40% Cr2O3,Lumps	DOMESTIC TRANSFER	IBM/4376/2011	Tata Steel Limited	545.990	8173470.30			
Below 40% Cr2O3,Lumps	DOMESTIC TRANSFER	IBM/4376/2011	Tata Steel Limited	985.050	14746198.50			
Below 40% Cr2O3,Lumps	CAPTIVE CONSUMPTION	IBM/5765/2011	Tata Steel Mining Limited	546.910	8187242.70			
Below 40% Cr2O3,Fines	DOMESTIC TRANSFER	IBM/5157/2011	ROHIT FERRO TECH LIMITED	10256.430	71028983.67			
Below 40% Cr2O3,Fines	DOMESTIC TRANSFER	IBM/4376/2011	Tata Steel Limited	1136.280	7869094.17			
Below 40% Cr2O3,Fines	DOMESTIC TRANSFER	IBM/4376/2011	Tata Steel Limited	1.190	8241.12			

To indicate separately if more than one buyer.

NOTE:- Mine owners are required to substantiate domestic sale value- FOB value for each grade of ore quoted above with copy of invoices (not to be submitted with the return; to be produced whenever required)

6. Give reasons for increase-decrease in production-nil production, if any, during the year compared to the previous year.

- a) Production as per Business Plan within Environment Clearance and Mining Plan limit. In Sales and Dispatches Quantity 1.19 MT of Below 40% Cr2O3 Fines has sent through Domestic Transfer towards Self Testing to R & D Tata Steel Limited, Jamshedpur for research and development purpose.

7. Give reasons for increase-decrease in grade wise ex-mine price, if any, during the year compared to the previous year.

- a) Market Price for the Financial Year 2022-23 is lesser than that of previous year. Resulting decrease in Ex-mine price of

Below 40% Cr2O3 Fines.

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PART-VII: COST OF PRODUCTION
Cost of production per tonne of ore-mineral produced

Sl. No.	Item	Cost per tonne (₹)
(i)	Direct Cost	2445.16
	(a) Exploration	164.00
	(b) Mining	2281.16
	(c) Beneficiation(Mechanical Only)	0.00
(ii)	Over-head cost	261.29
(iii)	Depreciation	62.93
(iv)	Interest	0.00
(v)	Royalty	938.33
(vi)	Payments made to DMF	93.83
(vii)	Payments made to NMET	18.77
(viii)	Taxes	0.00
(ix)	Dead Rent	0.00
(x)	Others (specify) Bid Premium	5805.50
	Total	9625.81

Note: Information given under Part VII will be kept confidential. The Government, however, will be free to utilize the information for general studies without revealing the identity of the firm.

Mineral Name	Production proposal for financial year 2022 - 2023	Production reported during the financial year 2022 - 2023	Difference
CHROMITE	102000	87955.388	14045

I Certify that the information furnished above is correct and complete in all respects.

Place: *Kamarda*
Dist: JAJAPUR, ODISHA
Pin: 755028
Date:

Signature

Behr.

Name in full: *Dibyendu Behr.*
Designation: *Mine Manager*
~~Owner-Agent~~ Mining Engineer-Manager
Manager

Kamarda Chromite Block
Para Steel Mining Limited

From: 165.225.124.222 at 2023-06-30 10:34:55

Signed by: 
Date: 30/06/2023 10:34:57 AM