

ENVIRONMENTAL STATEMENT

(Form – V)

*Under Rule – 14 of Environment Protection Rules, 1986
and Amendment, 1993
of*

Orient Mine No. 3 Underground Mine

For the year 2022-23



Mahanadi Coalfields Ltd.

**Post: Jagruti Vihar, Burla,
Dist: Sambalpur, Orissa-768020**

FORM-V

ENVIRONMENTAL STATEMENT

Environmental statement for the financial year ending 31st March, 2023

PART-A

1.	Name of Address of the owner/occupier of the industry operation or process (Name of the Project Officer/Sub-Area Manager & Office Address to be given)	Sri Gangadhar Mahto Chief Manager /Sub Area Manager , Orient Sub-Area ,Mine no.- 3 Post: Orient Colliery , Brajrajnagar Dist: Jharsuguda , Odisha
2.	Industry Category:	Primary (Coal Mining Operation)
3.	Production Capacity (Coal Production during: the year (2022-23)	0.69 MTPY (NIL) Production during 2022-23 is Nil
4.	Year of Establishment:	1968
5.	Date of the last Environmental Statement: submitted	16 th September 2022

PART-B

Water & Raw Material Consumption

Note: Average Water Consumption (Cu-m / Day) for the whole year is given. Raw material consumption is given per unit of coal produced.

(I) Water Consumption (Cu-m /Day):

Sl. No.	Industrial / Mining	Consumption in m ³ /Day
1.a	Haul Road Dust Suppression	-
b	Dust Suppression at CHP/ Surface bunker	-
c	Dust Suppression at Siding	-
d	Fire Fighting	05
e	Workshop	05
f	Others	30
2.	Domestic	-
3.	Total in Kl./Day	40 kl/ day

Name of Product	Water Consumption per unit of product (l/t)	
	2021-22	2022-23
COAL	3,479.78 (Water consumption per Te coal transported)	N/A

(II) Raw Material Consumption (Per tonne of Coal):

Name of Raw Material	Consumption of Raw Material (per tonne of coal produced)	
	2021-22	2022-23
H. S. Diesel (l/t)	2910 Ltr., (for transportation of balance coal of 2020-21 to Rly siding) Production- NIL (Departmental + Contractual)	NIL (Coal production was NIL)
Petrol (l/t)	120 Ltr, (Used for Flame safety Lamp) Production - NIL	70 Ltr, (Used for Flame safety Lamp) Production - NIL
Lubricants (l/t)	200 Ltr. (Used for pumping operation) Production- NIL	410 Ltr. (Used for pumping operation) Production- NIL
Electricity (KWh/t)	6569306 kWh, (Used for pumping operation)	5758257 kWh, (Used for pumping operation, Main mechanical ventilator etc)
Explosives (kg/t)	NIL (Coal production was NIL)	NIL (Coal production was NIL)

PART-C

Pollution Discharged to Environment / Unit of Output

(Parameter as specified in the Consent issued)

Pollutants	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges(mass/Volume)			Percentage variation from prescribed standards with reason
Water (Annual Average)					
		Mine effluent	OGT Outlet	STP Outlet	
TSS (mg/l)	Not possible to quantify	34.50	-	-	Within prescribed standards
BOD (mg/l)		-	-	-	
COD (mg/l)		28.50	-	-	
pH		7.51	-	-	
O & G (mg/l)		<4.0	-	-	
Air (Ambient air quality of one station – annual average) :					
Orient Mine no. 3					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	196.67			Within prescribed standards
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		105.71			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		46.96			
SO ₂ ($\mu\text{g}/\text{m}^3$)		13.50			
NO _x ($\mu\text{g}/\text{m}^3$)		16.96			

Part-D

Hazardous Wastes

As specified under Hazardous Wastes (Management & Handling) Rules, 1989.

Hazardous waste	Total Quantity (kg)	
	During the previous financial year 2021-22	During the financial year 2022-23
(a) From process :		
i. Burnt Oil in Workshops	NIL	NIL
ii. Oil soaked filters	NIL	NIL
iii. Waste containing oil	NIL	NIL
iv. Empty oil barrels	NIL	NIL
(b) From pollution control facilities:		
i. Oil/Oil emulsion recovery from Oil & Grease Trap	Not applicable	Not applicable
ii. Oily sludge	Not applicable	Not applicable
iii. Chemical Waste(if any)	Not applicable	Not applicable

Part-E

Solid Wastes (Other than hazardous)

Particulars	Total Quantity (kg)	
	During the previous financial year 2021-22	During the financial year 2022-23
(a) From process (Top Soil & overburden)	Not applicable	Not applicable
(b) From pollution control facilities (STP & Sed-Pond Sludge)	Not applicable	Not applicable
(c) 1 - Quantity recycled or re-utilized (OB back filled)	Not applicable	Not applicable
2 - Sold	Not applicable	Not applicable
3- Disposed	Not applicable	Not applicable

Part-F

Please specify the characteristics (in terms of concentration & quantum) of hazardous as well as solid waste and indicate the disposal practice adopted for both these categories of waste.

(I) Hazardous Waste:

Name of Hazardous Waste	Quantify generated in the year 2022-23	Disposal Practices
Burnt Oil etc (l) (from workshop)	NIL	-
Waste containing oil	NIL	-
Oil soaked filters (kg) (from workshop)	NIL	-
Empty oil barrels	NIL	-
Oil & Grease (kg) (from ETP/OGT)	Not Applicable	-
Oily Sludge (tonne) (from ETP/OGT)	Not Applicable	-
Oil imulsion	Not Applicable	-
Chemical waste if any (kg)	NIL	-
Battery (Nos.)	NIL	-

Note: A detailed note on disposal practices of the above should be given separately

(II) Solid Wastes:

Solid Waste	Quantify generated in the year 2022-23	Disposal Practices
Top Soil (m ³)	Not Applicable	Not Applicable
OB (m ³)	Not Applicable	Not Applicable
STP & Sed-Pond Sludge	Not Applicable	Not Applicable

Land Reclamation & OB disposal – Progressive till March, 2023:

	Area (Ha.)	OB Volume / Nos. of Plants
1) External OB Dump	Not Applicable	Not Applicable
2) Excavated land	Not Applicable	Not Applicable
3) Land affected (1+2)	Not Applicable	Not Applicable
4) Backfilled (Out of 2)	Not Applicable	Not Applicable
5) Land physically reclaimed (out of 3)	Not Applicable	Not Applicable
6) Land biologically reclaimed (out of 3)	Not Applicable	Not Applicable

Part-G

Impact of pollution control measures on conservation of natural resource and consequently on cost of production.

In order to carry out mining in an eco-friendly manner, a detailed Environmental Management Plan (EMP) was prepared by Regional Institute-VII of CMPDIL. The main pollution control measures suggested in EMP along with the measures implemented so far have been summarized in the Table- 1.1 to 1.3.

**Table- 1.1
Air Pollution Control Measures**

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Water sprinkling and grading of all roads to minimize air-borne dust from vehicles.	Provided	U/G Mine
2	Biological reclamation of land.	Not Applicable	U/G Mine
3	Green belt around mine & infrastructure.	Provided	-
4	Drills fitted with dust control devices.	-	Not applicable as the production discontinued from dated 31.03.2021
5	Dust suppression / dust extraction system to be provided in CHP.	-	Not applicable as the production discontinued from dated 31.03.2021
6	Mechanized coal transportation system.	Provided	No UG coal transportation as production discontinued from dated 31.03.2021. No surface coal transportation as coal stock is NIL.

**Table- 1.2
Water Pollution Control Measures**

Sl. No.	EMP Provisions/Additional precautions	Whether provided or not	Remarks
1	Mine Water is to be collected in central dump on dig side of pit. This will act as sedimentation lagoon.	Provided.	U/G Mine Sump
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Not Applicable.	U/G Mine
3	Surface run-off from external dump would be collected through a series of contour drains which would be connected to a water retention pond. The clear water from this pond will be re-utilized.	Not Applicable.	U/G Mine
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank and soak -pit.	Provided.	Septic Tank & Soak Pit has been provided.
5	Workshop effluents will be treated in Oil & Grease trap & sedimentation tank.	Not Applicable.	U/G Mine
6	Zero discharge from mine shall be maintained	-	U/G Mine
7	Piezometers shall be installed for measurement of under-ground water depth and its quality.	Provided	Piezometer MIP 05 installed Chhualiberna village.

Table- 1.3
Land Reclamation

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Top Soil Management: Proper stripping, storage and relocation of top soil.	Not Applicable	U/G
2	Physical Reclamation of OB dump: Proper reshaping and regarding of top surface, providing drainage arrangements and top soil spreading for external and internal dumps.	Not Applicable	U/G
3	Biological Reclamation: Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Not Applicable	U/G

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of environmental management during the year **2022-23** was **Rs.20,95,661.26/-** but there was no coal production as the production of mine is temporarily discontinued from dt. 01.04.2021.

Part-H


Additional measures/ investment proposal for environment protection including abatement of pollution, prevention of pollution.

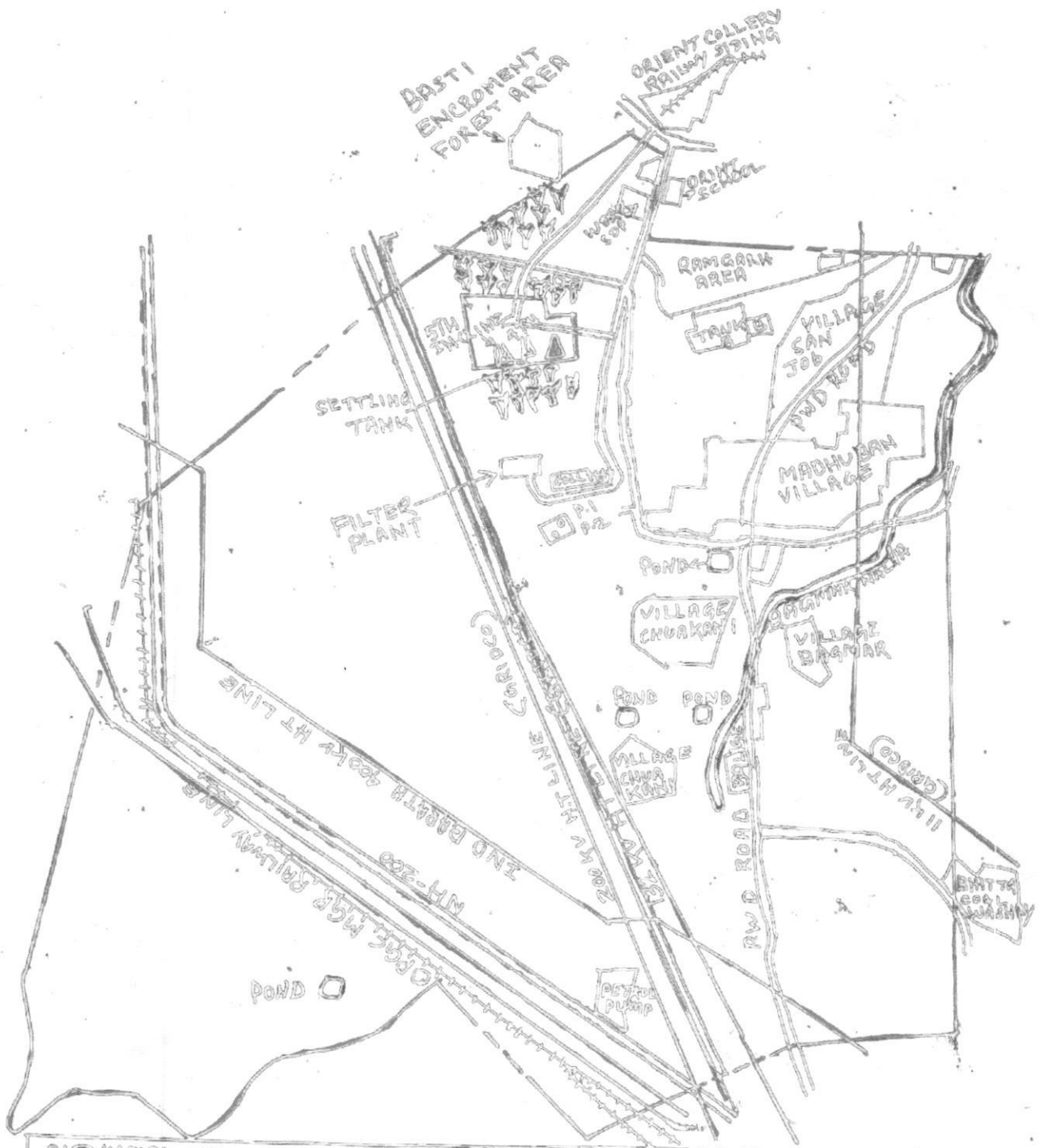
Head	Amount Rs. (Approx.)
Environmental monitoring	17,00,000.00/-
Plantation/ Plant distribution	1,00,000.00/-
Consent to Operate fee	2,76,000.00/-
Others (CGWA Ground water Abstraction charges)	31,00,000.00/-
Total	51,76,000.00/-

Part-I

Any other particular in respect of environmental protection and abatement of pollution.

Note: Please attach plan showing the relevant features like Present Working/ Quarry, External Dump, Back filling, Plantation, Sedimentation Pond/MDTP, Oil & Grease Trap/ETP, Workshop, CHP, STP etc. & Environment Monitoring Stations.


Signature of the Project Officer,
 (with seal) (ओरिएण्ट क्षेत्र)
Chief Manager (Mining) S.A.M.
Orient Sub- Area (Orient Area)



AIR/NOISE MONITRING STN	▲	MAHANADI COALFIELDS LIMITED
PLANTATION AREA	TTTT	MINE NO-3, ORIENT AREA
OFFICE BOUNDARY, PREMISES	□	NOT TO SCALE
POND/TANK	○	
BAGMAR NULLAH	~	
		23/8/2023 SURVEYOR
		23/8/2023 MANAGER