

ENVIRONMENTAL STATEMENT

(Form – V)

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

Orient Mine No. 4 Underground Mine

For the year 2022-2023



MCL

Mahanadi Coalfields Ltd.

Post: Jagruti Vihar, Burla,

Dist: Sambalpur, Orissa-768020

FORM-V
ENVIRONMENTAL STATEMENT
Environmental statement for the financial year ending 31st.Mar. 2023

Part-A

1	Name & 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 Post: Orient Colliery ,Brajrajnagar Dist: Jharsuguda , Odisha
2	Industry Category	Primary (Coal Mining Operation)
3	Production Capacity(Coal production during the year 2022-23)	0.18 MTY Production during 2022-23 is Nil
4	Year of establishment	1965
5	Date of last environmental statement submitted	16thSeptember 2022

Part-B

Water & Raw Material Consumption

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

(I) Water consumption (kl /day):

Sl.No.	Industrial/ Mining	Consumption in Kl/Day
1. a	Haul Road Dust Suppression	Nil
b	Dust Suppression at CHP/Surface bunker	Nil
c	Dust Suppression at siding	Nil
d	Fire fighting	Nil
e	Work shop	Nil
f	Others	5 kl/day
2	Domestic	Nil
3	Total Kl / day	5 kl/day

Name of the product	Water Consumption per unit of product (l)/t	
	During previous financial year (2021-22)	During current financial year (2022-23)
Coal	N/A	N/A

(II) Raw Material Consumption (per tonne of coal):

Name of the Raw Material	Consumption of Raw Material (per tonne of coal produced)	
	2021-22	2022-23
H.S. Diesel (L /t)	Nil	Nil
Petrol (L /t)	50 liters (Coal Production is Nil) (used for Flame safety Lamp)	40 liters (Coal Production is Nil) (used for Flame safety Lamp)
Lubricants (Hyd. Oil)(L /t)	140 liters (Coal Production is Nil) (usedfor pumping operation)	135 liters (Coal Production is Nil) (usedfor pumping operation)
Electricity (Unit/T)	4329007 kWh (Coal Production is Nil) (used for pumping operation)	4243650 kWh (Coal Production is Nil) (used for pumping operation, Main Mechanical Ventilator etc.)
Explosive (Kg/T)	Nil (Coal Production is Nil)	Nil (Coal Production is 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
		Mine effluent	OGT Outlet	STP Outlet	
Water (Annual Average)					
TSS (mg/l)	Not possible to quantify	37	-	-	Within prescribed standards
BOD (mg/l)		-	-	-	
COD (mg/l)		29.50	-	-	
pH		7.65	-	-	
O & G (mg/l)		<4.0	-	-	
Air (Ambient air quality of one station – annual average) :					
Orient Mine no. 4					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	199.08			Within prescribed standards
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		108.71			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		46.42			
SO ₂ ($\mu\text{g}/\text{m}^3$)		13.95			
NO _x ($\mu\text{g}/\text{m}^3$)		18.72			

Part-D
Hazardous Wastes

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

Hazardous Waste	Table Quantity (Kg)	
	During the previous financial Year (2021-22)	During the Current financial Year (2022-23)
1. From process		
(a) Used Oil in workshop	Nil	Nil
(b) Oil soaked filters	Nil	Nil
(c) Waste Containing oil	Nil	Nil
(d) Empty Oil barrels	Nil	Nil
2. From pollution control facilities		
(a) Oil recovery from Oil & Grease Trap	Not applicable	Not applicable
(b) oily sludge	Not applicable	Not applicable
(c) any other chemical waste	Not applicable	Not applicable

Part-E
Solid Wastes (Other than Hazardous)

Particulars	Total Quantity	
	During the previous financial Year (2021-22)	During the Current financial Year (2022-23)
(a). From process (Top soil and over burden)	Not Applicable	Not Applicable
(b). From pollution control facilities From pollution control facilities (STP& Sed-Pond Sludge)	Not Applicable	Not Applicable
(c) 1. Quantity recycled or reutilized (OB- back-filled)	Not Applicable	Not Applicable
2-Sold	Not Applicable	Not Applicable
3-Disposed	Not Applicable	Not Applicable

Part-F

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

(1) Hazardous Wastes:-

Name of Hazardous Wastes	Quantity generated in the year 2022-23	Disposal Practice
Used Oil etc. (l) (from W/Shop))	Nil	Not applicable
Waste Containing oil	Nil	-
Empty Oil barrels	Nil	-
Oil soaked filters(kg) (from W/Shop)	Nil	-
Oil & grease (kg) (from ETP/OGT)	Not applicable	Not applicable
Oily sludge (tone) (from ETP/OGT)	Not applicable	Not applicable
Battery Nos.	Nil	-

Note: - a detailed note on disposal practices of the above should be given separately.

(II) Solid wastes:

Solid wastes	Quantity generated in the year 2022-23	Disposal Practice
Top soil (M ³)	NIL	Not Applicable
OB(M ³)	NIL	Not Applicable
STP & Sed-Pond Sludge	NIL	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 resources 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

SI No.	EMP provision	Whether provided or Not	Remarks
1.	Watering and grading of all roads to minimize air borne dust from vehicle	Not applicable	UG Mine (No coal production)
2.	Biological reclamation of land	Not applicable	
3.	Green belt around mine & infrastructures.	Provided	
4.	Drill fitted with dust control devices	Not applicable	
5.	Dust suppression/dust extraction system to be provided in CHP/surface bunker.	Not applicable.	
6.	Improved maintenance of plant & machinery.	Provided	
7.	Mechanized coal transportation system	Not applicable	

Table 1.2
Water pollution control Measures

SI No.	EMP provision	Whether provided or Not	Remarks
1.	Mine water is to be collected in central sump on dip side of pit. This will act as sedimentation lagoon.	Provided	Underground Mine
2.	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Not applicable	
3.	Surface run-off from external dump would be collected through a series of contour drains which would be connected to water retention pond. The clear water from this pond will be discharged to natural water course.	Not applicable	
4.	Domestic waste water will be treated in screens, oxidation pond/aerated lagoon. Sanitary waste to be disposed off into septic tank &soak-pit.	Septic tank and soak pits are provided	
5.	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Not applicable	
6.	Zero discharge from mine shall be maintained	-	
7.	Piezometers shall be installed for measurement of underground water depth and its quality	MIP No.-3 Beside IB Valley GM office.	

Table 1.3
Land Reclamation

Sl No.	EMP provision	Whether provided or Not	Remarks
1.	Top soil Management: Proper stripping Storage and Relocation of top soil.	Not applicable	Underground Mine
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	
3.	Biological Reclamation: Plantation of suitable species of herb. Shrubs & indigenous trees over technically reclaimed dumps.	Not applicable	

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of environmental management during the year 2022-23 was Rs.17,20,399.70/- but there was no coal production.

Part-H

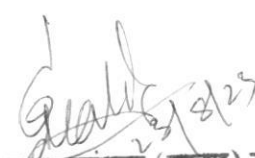
Additional measures/ investment proposal for environment protection including abatement of pollution, prevention of pollution.

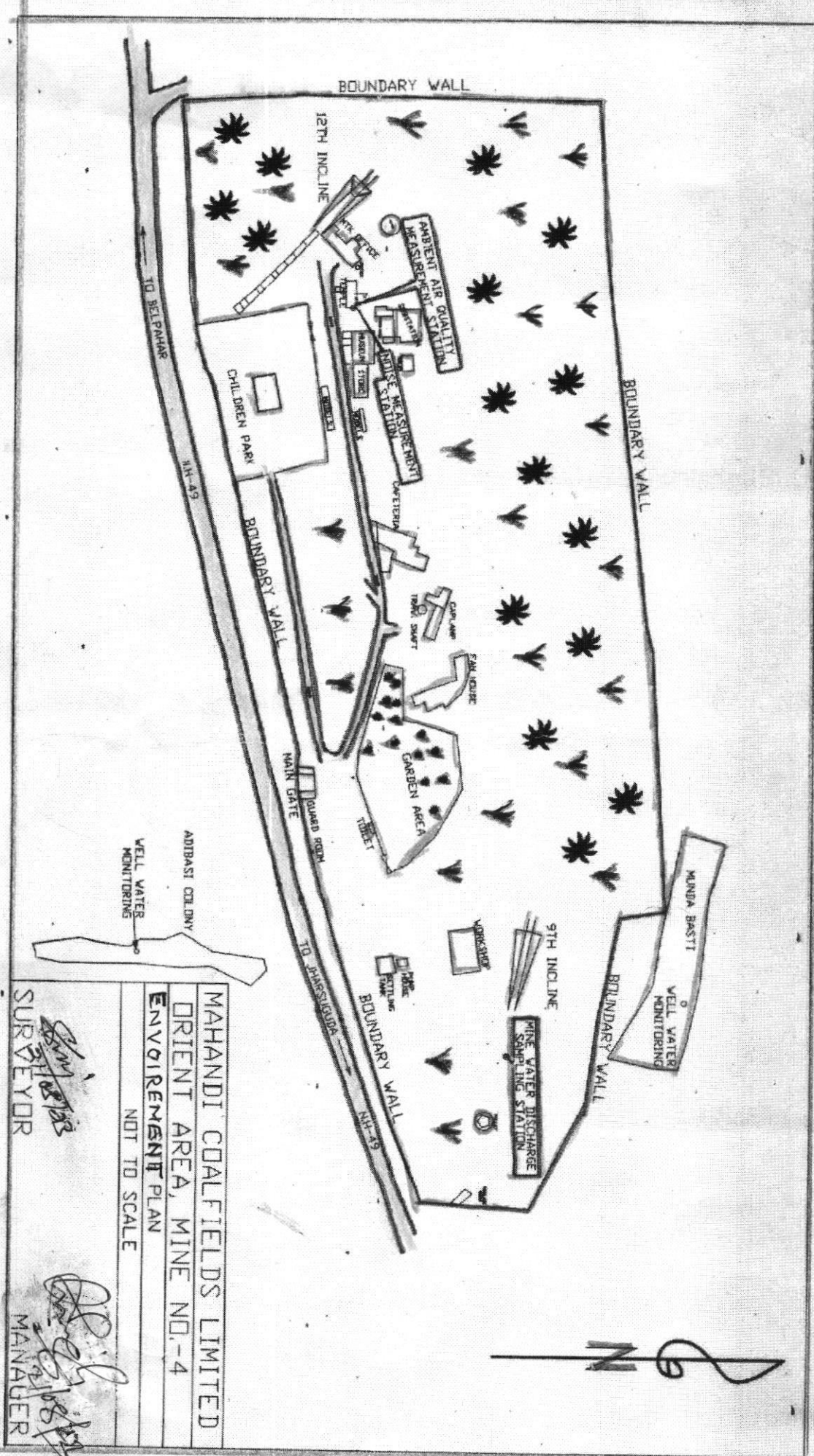
Head	Amount Rs. (Approx.)
CMPDIL Bill Payment	14,00,000.00/-
Plantation/ Plant distribution	1,00,000.00/-
Consent to Operate fee	1,50,000.00/-
Others (CGWA Ground water Abstraction charges)	38,00,000.00/-
Total	54,50,000.00/-

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)
Chief Manager (Mining) S.A.M.
Orient Sub- Area (Orient Area)



MAHANDI COALFIELDS LIMITED
 ORIENT AREA, MINE NO.-4
 ENVIRONMENT PLAN
 NOT TO SCALE

SURVEYOR
[Signature]

MANAGER
[Signature]