

# **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 2024-2025**



# **MCL**

**Mahanadi Coalfields Ltd.**

**Post: Jagruti Vihar, Burla,**

**Dist: Sambalpur, Orissa-768020**

**FORM-V**

**ENVIRONMENTAL STATEMENT**

**Environmental statement for the financial year ending 31st March, 2025**

**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)	Agent – Sri Narayan Garnayak Chief Manager/ Sub Area Manager, Orient Sub Area, Mine No. 4 Post: Orient Colliery, Brajrajnagar Dist: Jharsuguda, Odisha
2.	Industry Category:	Primary (Coal Mining Operation)
3.	Production Capacity (Coal Production during: the year (2024-25))	0.18 MTPY Production during 2024-25 is Nil
4.	Year of Establishment:	1965
5.	Date of the last Environmental Statement: submitted	30 <sup>th</sup> September 2024

**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 <sup>3</sup> /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	Workshop	Nil
f	Others	5 kl/day
2.	Domestic	Nil
3.	<b>Total in m<sup>3</sup>/Day</b>	<b>5 Kl./Day</b>

Name of Product	Water Consumption per unit of product (l/t)	
	2023-24	2024-25
COAL	N/A	N/A

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

Name of Raw Material	Consumption of Raw Material (per tonne of coal produced)	
	2023-24	2024-25
H.S.Diesel (l/t)	Nil (Coal Production was NIL)	120 Ltr Production -Nil
Petrol (l/t)	70 Ltr, (Used for Flame Safety Lamp) Production -Nil	40 Ltr, (Used for Flame Safety Lamp operation) Production -Nil
Lubricants (l/t)	Nil	60 Ltr, (Used for pumping operation) Production -Nil
Electricity (KWh/t)	7477000 kWh, (Used for Pumping Operation, Main Mechanical Ventilator etc)	4686825 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
<b>Water (Annual Average)</b>					
		Mine effluent	OGT Outlet	STP Outlet	
TSS (mg/l)	Not possible to quantify	32.17	-	-	Within prescribed standards
BOD (mg/l)		-	-	-	
COD (mg/l)		23.17	-	-	
pH		7.43	-	-	
O & G (mg/l)		<4.0	-	-	
<b>Air (Ambient air quality of one station – annual average) : Orient Mine no. 4</b>					
SPM ( $\mu\text{g}/\text{m}^3$ )	Not possible to quantify	237.64			Within prescribed standards
PM <sub>10</sub> ( $\mu\text{g}/\text{m}^3$ )		132.05			
PM <sub>2.5</sub> ( $\mu\text{g}/\text{m}^3$ )		57.32			
SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )		14.66			
NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )		15.92			

**Part-D**  
**Hazardous Wastes**

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

Hazardous waste	Total Quantity (kg)	
	During the previous financial year 2023-24	During the financial year 2024-25
<b>(a) From process :</b>		
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>(b) From pollution control facilities:</b>		
i. 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 2023-24	During the financial year 2024-25
<b>(a) From process (Top Soil &amp; overburden)</b>	Not applicable	Not applicable
<b>(b) From pollution control facilities (STP &amp; Sed-Pond Sludge)</b>	Not applicable	Not applicable
<b>(c) 1 - Quantity recycled or re-utilized (OB back filled)</b>	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:**

<b>Name of Hazardous Waste</b>	<b>Quantity generated in the year 2024-25</b>	<b>Disposal Practices</b>
Burnt Oil etc (l) (from workshop)	Nil	NA
Waste containing oil	Nil	NA
Oil soaked filters (kg) (from workshop)	Nil	NA
Empty oil barrels	Nil	NA
Oil & Grease (kg) (from ETP/OGT)	Not Applicable	Not Applicable
Oily Sludge (tons) (from ETP/OGT)	Not Applicable	Not Applicable
Oil emulsion	Not Applicable	Not Applicable
Chemical waste if any (kg)	NIL	NA
Battery (Nos.)	NIL	NA

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

**(II) Solid Wastes:**

<b>Solid Waste</b>	<b>Quantity generated in the year 2024-25</b>	<b>Disposal Practices</b>
Top Soil (m <sup>3</sup> )	Not Applicable	Not Applicable
OB (m <sup>3</sup> )	Not Applicable	Not Applicable
STP & Sed-Pond Sludge	Not Applicable	Not Applicable

**Land Reclamation & OB disposal – Progressive till March, 2025:**

	<b>Area (Ha.)</b>	<b>OB Volume / Nos. of Plants</b>
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.	Not Applicable	U/G Mine (No coal production)
2	Biological reclamation of land.	Not Applicable	
3	Green belt around mine & infrastructure.	Provided	
4	Drills fitted with dust control devices.	Not Applicable	
5	Dust suppression / dust extraction system to be provided in CHP.	Not Applicable	
6	Mechanized coal transportation system.	Not Applicable	

**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 sump on dip side of pit. This will act as sedimentation lagoon.	Provided.	U/G 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 a water retention pond. The clear water from this pond will be re-utilized.	Not Applicable.	
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.	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 under-ground water depth and its quality.	MIP No. 3 Beside IB Valley GM Office	

**Table- 1.3**  
**Land Reclamation**

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

**IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION**

Cost of environmental management during the year 2024-25 was Rs. 1,49,40,583.2 but there was no coal production.

**Part-H**

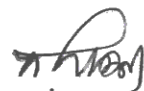
**Additional measures/ investment proposal for environment protection including abatement of pollution, prevention of pollution.**

Head	Amount Rs. (Approx.)
CMPDIL Bill Payment	13,64,553.18/-
Consent to Operate fee	1,50,000 /-
CGWA	1,34,17,030 /-
Total	1,49,31,583.2/-

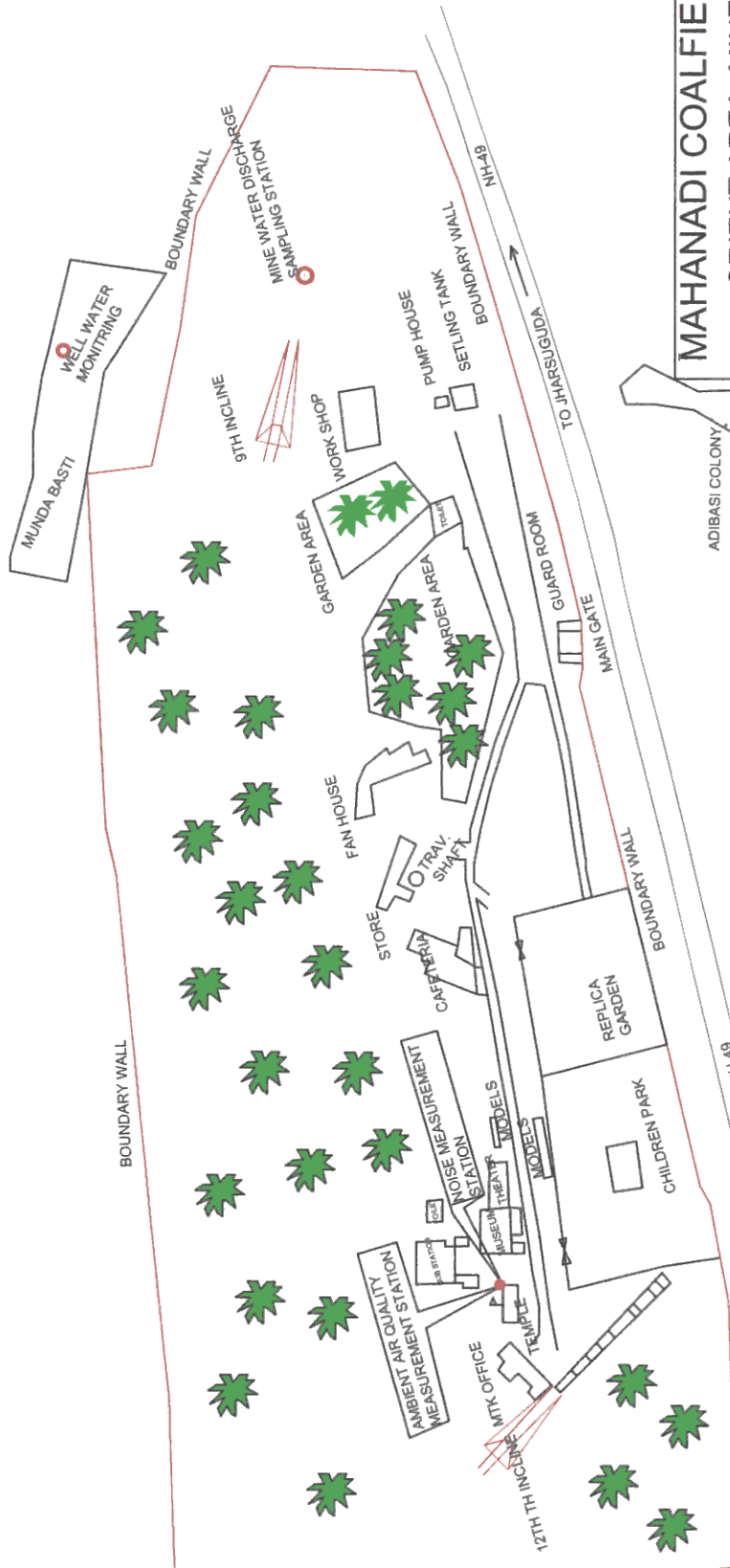
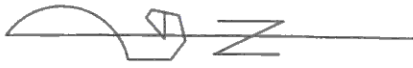
**Part-I**

**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.**

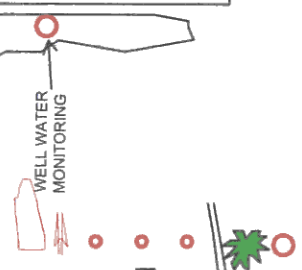
  
 17/9/25  
**Signature of the Sub Area Manager**  
 Orient Sub Area  
 Orient Area, MCL

मुख्य प्रबंधक (खनन) उ.क्षे.प्र  
 ओरिएण्ट उप-क्षेत्र (ओरिएण्ट क्षेत्र)  
**Chief Manager (Mining)/S.A.M.**  
**Orient Sub- Area (Orient Area)**



**MAHANADI COALFIELDS LIMITED**  
**ORIENT AREA, MINE NO-4**  
**ENVIRONMENT PLAN**  
**NOT TO SCALE**  
 SURVEYOR  
 MANAGER

- INDEX**
1. MINE PREMISES
  2. INCLINE
  3. AMBIENT AIR QUALITY MEASUREMENT STATION
  4. NOISE MEASUREMENT STATION
  5. MINE WATER DISCHARGE SAMPLING STATION
  6. ROAD
  7. PLANTATION
  8. WELL WATER MONITORING



5/18/81  
 2/8/81  
 (Signature)