

# **ENVIRONMENTAL STATEMENT**

**(Form – V)**

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

*of*

## **Bhubaneswari Opencast Mine**

**For the year 2024-25**



# **MCL**

**Mahanadi Coalfields Ltd.**

**Post: Jagruti Vihar, Burla,**

**Dist: Sambalpur, Orissa-768020**

**FORM-V**  
**ENVIRONMENTAL STATEMENT**  
**Environmental statement for the financial year ending 31<sup>st</sup> Mar, 2025**

**Part - A**

- i) 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) : R Sriram, Project Officer  
Bhubaneswari OCP, JA.  
P.O: Dera Colliery,  
Dist: Angul, PIN 759103.
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production during the year 2022-23) : 30MT (30MT)
- iv) Year of establishment : 2007
- v) Date of the last Environmental Statement submitted : 12.09.2024

**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):**

Ser No.	Industrial/ Mining	Consumption in Cu-m/ day
1. a	Haul Road Dust Suppression	1045
b	Dust Suppression at CHP	NA
c	Dust Suppression at Siding	80
d	Fire Fighting	45
e	Workshop	12
f	Others	-
2.	Domestic	22
3.	<b>Total in kℓ/ day</b>	<b>1204</b>

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2023-24	2024-25
Coal	18.13	24.89

**(II) Raw Material Consumption (per ton of coal):**

Name of Raw Material	Consumption of Raw Material (per ton of Coal produced)	
	2023-24	2024-25
H.S. Diesel (ℓ/ t)	0.84 (Dept.+Cont.)	1.09 (Dept.+Cont.)
Petrol (ℓ/ t)	Nil	Nil
Lubricants (ℓ/ t)	0.001 (Dept.+Cont.)	0.007 (Dept.+Cont.)
Electricity (Units/ t)	0.45 (Dept.+Cont.)	1.29 (Dept.+Cont.)
Explosives (kg/ t)	0.07	0.75

### 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 reasons
<b>Water (annual average)</b>					
		Mine Effluent	OGT Outlet	STP Outlet	Within the prescribed limit.
TSS (mg/l)	Not possible to quantify	63.3	-	-	
BOD mg/l)		2.2	-	-	
COD (mg/l)		60.1	-	-	
pH		7.2	-	-	
O & G (mg/l)		2.7	-	-	
<b>Air (Ambient air quality of one station (S-E of Mine) – annual average)</b>					
SPM ( $\mu\text{g}/\text{m}^3$ )	Not possible to quantify	142.00			Within the prescribed limit.
PM10 ( $\mu\text{g}/\text{m}^3$ )		68.68			
PM2.5 ( $\mu\text{g}/\text{m}^3$ )		43.63			
SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )		54.54			
NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )		56.25			

### Part - D

#### Hazardous Wastes

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

Hazardous Waste	Total Quantity (kg)	
	During the current financial year (2023-24)	During the current financial year (2024-25)
<b>(a) From process :</b>		
i. Burnt Oil in Workshops	47266 L	13970 L
ii. Oil soaked filters	220 Nos	29 Nos
<b>(b) From pollution control facilities:</b>		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	200 KG	18 KG
ii. Oily sludge	0.2 T	0.05 T
iii. Chemical Waste(if any)	-	

**Part – E**

**Solid Wastes (other than hazardous)**

Particulars	Total Quantity	
	During the current financial year (2023-24)	During the current financial year (2024-25)
(a) From process (Top soil and Over burden)	8.55 mm <sup>3</sup>	15.6 mm <sup>3</sup>
(b) From pollution control facilities (STP & Sed-Pond Sludge)	-	-
(c) 1- Quantity recycled or re-utilized (OB back-filled)	23.07 mm <sup>3</sup>	46.22 mm <sup>3</sup>
2- Sold	-	
3- Disposed	-	

**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 wastes.**

**(I) Hazardous Wastes:**

Name of Hazardous Wastes	Quantity generated in the year 2024-25	Disposal Practices
Burnt Oil, etc. (l) (from W/Shop)	13970 L	By e-auction to authorized parties
Oil soaked filters(kg) (from W/Shop)	29 Nos	Disposed in impervious pit under covered shed.
Oil & Grease (kg) (from ETP/ OGT)	18 KG	Disposed in impervious lined pit under covered shed.
Oily Sludge (te.) (from ETP/ OGT)	0.05 T	Disposed in impervious pit under covered shed.
Oil emulsion	-	-
Chemical Waste if any (kg)	-	-
Battery (nos.)	32 nos.	By e-auction to authorized parties

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

**(II) Solid Wastes:**

Solid Waste	Quantity generated in the year 2024-25	Disposal Practices
Top Soil (m <sup>3</sup> )	85000 m <sup>3</sup>	Stored separately for reclamation of land.
OB (m <sup>3</sup> )	46220000 m <sup>3</sup>	Utilized for back filling.
STP & Sed-Pond Sludge	NA	-

## Land Reclamation & OB disposal – progressive till March, 2025:

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	0	0
2) Excavated land	535.60	207.03 mm <sup>3</sup>
3) Land affected (1+2)	535.60	
4) Backfilled (out of 2)	204.90	194.97 mm <sup>3</sup>
5) Land physically reclaimed (out of 3)	105.34	-
6) Land biologically reclaimed ( out of 3)	25	62,500 Nos

- 12.34 mm<sup>3</sup> dumped in Ananta OCP in the year 2020-21.
- Re-Handling of external dump resulted in loss of 94Ha biological reclamation on it and 33Ha on internal dumps.

### 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

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	Static fog cannons, mobile fog cannon, mist sprayers, fixed sprinklers & mobile tanker are deployed Mobile water tankers, mist type sprinklers & graders are provided.
2	Biological reclamation of land.	Provided	62,500 Nos of plants have been planted over technically reclaimed/backfilled area
3	Green belt around mine & infrastructures.	Provided	By plantation.
4	Drills fitted with dust control devices.	Provided	Wet drilling technology
5	Dust suppression/ dust extraction system to be provided in CHP.	NA	There is no CHP
6	Improved maintenance of plant &	Provided	-

	machinery.		
7	Mechanized coal transportation system.	Provided	-

**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	
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provided	-
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	Provided	-
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank & soak-pit.	Provided	-
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	-
6	Zero discharge from mine shall be maintained.	Maintained	-
7	Piezometers shall be installed for measurement of under-ground water depth and its quality	Provided	1. Piezometer MTP -8 at Chakadola High School 2. MTP -7 at BCML Workshop.

**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.	Provided	Dumped in a separate specified area.
2	<b>Physical Reclamation of OB Dump:</b> Proper reshaping and re-grading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.	Provided	Provided in reclaimed area.
3	<b>Biological Reclamation:</b>	Provided	62,500 Nos of plants have

Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	been planted over technically reclaimed/backfilled area.
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**IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION**

Cost of Environmental management during the FY 2024-25 was Rs. 15.38/ tonne of coal.

**Part – H**

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

Head	Amount Rs.(approx)
Contractual water spraying	160 Lakhs
Plantation	100 Lakhs
Firefighting/Fire tender	60 Lakhs
Installation of wind barrier at sidings	500 Lakhs
REM station	125 Lakhs
Deployment of Mechanical Road Sweeper on hiring basis	85 Lakhs
Installation of wheel Washing System at exit point of quarry	50 Lakhs
Installation trolley Mounted Fog canon for siding no 1,2,3&4	120 Lakhs
Installation of digital water flow meter with telemetry facility	60 Lakhs
Installation of telemetry arrangement in Piezometers	30 Lakhs
Installation of mechanical oil skimmer in ETP	50 Lakhs
Deployment of mist type sprinklers	75 Lakhs
Deployment of mobile Fog Canon for CT road & Coal corridor on hiring basis	175 Lakhs
Miscellaneous	50 Lakhs
<b>Total</b>	<b>: 1640 Lakhs</b>

**Part – I**

**Note: Please attach a 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. and Environmental Monitoring Stations.**

*Signature*  
**Signature of the Project Officer.**

*for*

(With seal)

