

# **ENVIRONMENTAL STATEMENT**

**(Form – V)**

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

## **Ib-Valley Coalfield, MCL**

**For the year 2024-25**



# **MCL**

**Mahanadi Coalfields Ltd.**

**Post: Jagruti Vihar, Burla,**

**Dist: Sambalpur, Orissa-768020**

# **ENVIRONMENTAL STATEMENT**

**(Form – V)**

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

*of*

## **Ib-Valley Area**

**For the year 2024-25**



# **MCL**

**Mahanadi Coalfields Ltd.**

**Post: Jagruti Vihar, Burla,**

**Dist: Sambalpur, Orissa-768020**

# **ENVIRONMENTAL STATEMENT**

**(Form – V)**

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

*of*

## **Samaleswari Opencast 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 31<sup>st</sup> Mar, 2025

**Part – A**

- i) Name & Address of the owner/ occupier :- Shri Kanhaiya Mishra,  
of the industry operation or process Project Officer, Samaleswari OCP  
(Name of the Project Officer/ Sub-Area P.O:- Rampur Colliery  
Manager & Office address to be given) Dist. :- Jharsuguda (Odisha)  
Pin: - 768225
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production during the year 2024-25) : 15 MTPA, (14.049 Million Tonnes)
- iv) Year of establishment : 1989
- v) Date of the last Environmental Statement submitted : 30.09.2024

**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
I. a	Haul Road Dust Suppression using tanker	528
b	Dust Suppression using fog canon	210
c	Fire Fighting	112
d	Workshop	40
e	Others (Greenbelt, S/M, Drill & other machineries etc.)	40
f	Domestic	0
g	Total in kℓ/ day	930 kℓ/ day

Name of the Product	Water Consumption per unit of product (ℓ/ t)
	FY 2024-25
Coal (14.049 MTPA)	24.16

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

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2023-24 (Dept. & Cont.)	2024-25 (Dept. & Cont.)
H.S. Diesel (ℓ/ t)	0.479 ℓ/t	0.209 ℓ/t
Petrol (ℓ/ t)	Nil	Nil
Lubricants (ℓ/ t)	0.0093 ℓ/t	0.0038 ℓ/t
Electricity (Units/ t)	2.18 KWH/t	1.46 KWH/Te
Explosives (kg/ t)	3.81	There have been no blasting in coal face. 100% of coal is extracted by eco-friendly surface miner.

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	30.66	34.66	31.88	
BOD mg/ℓ)		-	-	<2	
COD (mg/ℓ)		32	30.66	-	
pH		6.85	7.16	7.33	
O & G (mg/ℓ)		<4.0	<4.0	-	
<b>Air (Ambient air quality of one station – annual average) South of Mine.</b>					
SPM (µg/m <sup>3</sup> )	Not possible to quantify	247.70			Within the prescribed limit
PM <sub>10</sub> (µg/m <sup>3</sup> )		130.66			
PM <sub>2.5</sub> (µg/m <sup>3</sup> )		61.75			
SO <sub>2</sub> (µg/m <sup>3</sup> )		14.71			
NO <sub>x</sub> (µg/m <sup>3</sup> )		22.12			

**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)
(a) From process :		
i. Burnt Oil in Workshops	30240 ℓts	28560 ℓts
ii. Oil soaked filters	1433 Nos.	1307 Nos.
(b) From pollution control facilities:		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	-	-
ii. Oily sludge	175 Cu-m	186 Cu-m
iii. Chemical Waste (if any)	-	Nil

**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)	15.86 Mm <sup>3</sup>	34.016 Mm <sup>3</sup>
(b) From pollution control facilities (STP & Sed-Pond Sludge)	STP (i) 3.8 m <sup>3</sup> MDTP (ii) Nil	STP- 4.6 m <sup>3</sup> MDTP- Nil
(c) 1- Quantity recycled or re-utilized (OB back-filled)	15.86 Mm <sup>3</sup>	34.016 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)	28560 Ltrs	Deposited to Regional Store from where it is disposed to authorized parties by auction
Oil soaked filters(kg) (from W/Shop)	1307 Nos	Disposed into impervious lined pit
Oil & Grease (kg) (from ETP/ OGT)	-	Stored at unit store for further deposition to Regional Store
Oily Sludge (te.) (from ETP/ OGT)	186 Cu-m	Disposed into impervious lined pit
Oil emulsion	Nil	-
Chemical Waste if any (kg)	Nil	-
Battery (nos.)	06 Nos.	Deposited to Regional Store from where it is disposed to authorized parties by auction

**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
Topsoil (m <sup>3</sup> )	3.136 Mm <sup>3</sup>	Spread over back filled area
OB (m <sup>3</sup> )	30.874 Mm <sup>3</sup>	Filled in quarry voids
STP & Sed-Pond Sludge	STP (i) 4.6 m <sup>3</sup> MDTP (ii) Nil	(i) Used as manure within the premises of STP for gardening

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

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	24.86	4.06Mm <sup>3</sup>
2) Excavated land	661.69	282 Mm <sup>3</sup>
3) Land affected (1+2)	686.55	-
4) Backfilled	453.28	277.94 Mm <sup>3</sup> (Excluding External OB dump)
5) Land physically reclaimed	147	-
6) Land biologically reclaimed	136.54	115.6 Mm <sup>3</sup> / 971785 Nos.

**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**

<b>Sl. No.</b>	<b>EMP Provisions</b>	<b>Whether provided or not</b>	<b>Remarks</b>
<b>1</b>	Water sprinkling and grading of all roads to minimize air-borne dust from vehicles.	Provided	By mobile water sprinkler
<b>2</b>	Biological reclamation of land.	Provided	-
<b>3</b>	Green belt around mine & infrastructures.	Provided	By plantation
<b>4</b>	Drills fitted with dust control devices.	Provided	-
<b>5</b>	Dust suppression/ dust extraction system to be provided in CHP.	Provided	At present there is no CHP at SOCP
<b>6</b>	Improved maintenance of plant & machinery.	Provided	By scheduled maintenance
<b>7</b>	Mechanized coal transportation system.	Provided	RLS

**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-utilised	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	STP Provided.
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	ETP 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	MTP-04: Near Believers Church School, Brajrajnagar

**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	-
2	<b>Physical Reclamation of OB Dump:</b> Proper reshaping and regrading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.	Provided	-
3	<b>Biological Reclamation:</b> Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Provided	-

## IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

COST OF ENVIRONMENTAL MANAGEMENT DURING 2024-25 was Rs. 11.08 per tonne of Coal (approx.).

### Part – H

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

Head	Amount Rs. (approx)
Distribution of plants to peripheral villagers/ Camp	0.18 lacs
Operation & Maintenance of ETP	14.92 lacs
Operation & Maintenance of MDTP	6.14 lacs
Operation maintenance and renovation of STP	6.38 lacs
Plantation on back-filled area/ Plantation in Urban Area/ Green Belt Area.	203.26 lacs
Routine Environmental Monitoring by CMPDIL	63.56 lacs
Water tanker cost (Dept. + Cont.) engaged in Technical and biological reclamation	317.59 lacs
Dozing cost as per Mine reclamation	443.05 lacs
Grading cost as per Mine reclamation	229.37 Lacs
Fog canons	157.52 lacs
CTO Payment	60.00 lacs
HWA payment	0.05 lacs
CGWA payment	35.02 lacs
Road sweeper payment	9.29 lacs
Hazardous waste container	10.08 lacs
<b>Total</b>	<b>1556.41 lacs</b>

### Part – I

Any other particulars for improving the quality of the environment.

**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.

Plan – enclosed

  
Signature of the Project Officer.

(with seal)  
G. M. Narasimha / Project Officer  
Sambasari Open Cast Project  
Jb Valley Area, MCL



- 1. QUARRY BART
- 2. MINE BOUNDARY SCOP
- 3. COAL TRANSPORT ROAD
- 4. COAL TRANSPORT ROAD
- 5. WALKWAY
- 6. EXTERIOR OIL PUMP
- 7. BACKFILLING DUMP
- 8. RAILWAY LINE
- 9. RAILWAY LINE
- 10. RAILWAY LINE
- 11. RAIL WITH LAMBER & P.L.
- 12. COAL FREE
- 13. COAL FREE
- 14. COAL STOCK YARD
- 15. DECOILED AREA
- 16. LIGHT VEHICLE ROAD
- 17. LEASE HOLD BOUNDARY
- 18. 1:12 BOUNDARY
- 19. PLANTATION AREA (24-25)
- 20. PLANTATION AREA (25-26)

PLANTATION DATA FOR THE YEAR 2024-25

Sl. No.	Area (Ha)	No. of Trees	Remarks
1	1.50	1500	Plantation Area (24-25)
2	1.50	1500	Plantation Area (25-26)
3	1.50	1500	Plantation Area (26-27)
4	1.50	1500	Plantation Area (27-28)
5	1.50	1500	Plantation Area (28-29)
6	1.50	1500	Plantation Area (29-30)
7	1.50	1500	Plantation Area (30-31)
8	1.50	1500	Plantation Area (31-32)
9	1.50	1500	Plantation Area (32-33)
10	1.50	1500	Plantation Area (33-34)
11	1.50	1500	Plantation Area (34-35)
12	1.50	1500	Plantation Area (35-36)
13	1.50	1500	Plantation Area (36-37)
14	1.50	1500	Plantation Area (37-38)
15	1.50	1500	Plantation Area (38-39)
16	1.50	1500	Plantation Area (39-40)
17	1.50	1500	Plantation Area (40-41)
18	1.50	1500	Plantation Area (41-42)
19	1.50	1500	Plantation Area (42-43)
20	1.50	1500	Plantation Area (43-44)

**MAHANADI COALFIELDS LIMITED**  
**1B VALLEY AREA**  
**SAMLESHWARI OPENCAST PROJECT**  
 SURFACE PLAN  
 SCALE: 1:5000

THIS IS CERTIFIED THAT THE PLAN IS CORRECT

*[Signature]*  
 28/10/24

*[Signature]*  
 28/10/24