

ENVIRONMENTAL STATEMENT

(Form – V)

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

of

Jagannath Opencast Mine

For the year 2024-25



MCL

Mahanadi Coalfields Ltd.

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

FORM - V

**JAGANNATH COLLIERY, MCL
ENVIRONMENTAL STATEMENT**

Environmental statement for the financial year ending 31" March,2025

Part- A

1. Name and 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 S.K. Manik
: Office of the Project Officer
: Jagannath Colliery
: PO: Balanda
: Talcher, Dist.: Angul, 759116
2. Industry category : Primary (Coal Mining Operation)
3. Production Capacity : 7.5MTY
(Coal production during the year 2024-25) : 7.5 Mil Te
4. Year of establishment : 1971
5. Date of last environmental statement submitted: 21.09.2024

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 & OB produced.

I. WATER CONSUMPTION (KL/DAY)

Sl.No.	Industrial/Mining	Consumption in Cu-m/Day
a.	Haul road dust suppression	1050.00
b.	Dust suppression at CHP	650.00
c.	Dust suppression at siding	NIL
d.	Fire fighting	100.00
e.	Workshop	300.00
f.	Others (Green belt, recharge etc.)	200.00
g.	Domestic (Industrial use)	101.00
	Total in KL/Day	2381.00

Name of the Product	Water consumption per unit of product in Liter.	
	2023-24	2024-25
Coal	119.45	117.37

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

Sl No.	Name of raw material	Consumption of Raw material (per Te of coal produced)	
		2023-24	2024-25
1.	HS diesel (l/t)	1.632	1.629
2.	Petrol (l/t)	-	-
3.	Lubricants (l/t)	0.008	0.008
4.	Electricity (Units/t)	4.531	4.528
5.	Explosives (Kg/t)	0.322	0.320

Buddy J.P.

Sriniketa

Part- C
POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT

(Parameter as specified in the "Consent" issued)

Pollutant	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)			Percentage variation from prescribed standard with reasons
Water (annual average)					
TSS (mg/l)	Not possible to quantify	Mine Effluent	OGT Outlet	STP Outlet	Within permissible limits
BOD (mg/l)		43	29.50	34.75	
COD (mg/l)		-	-	<2.0	
pH		26	24	-	
O&G(mg/l)		7.00	7.48	7:65	
		<4.00	<4.00	-	
Air (Ambient air quality of one station- annual average) Near MDTP					
SPM($\mu\text{g}/\text{m}^3$)	Not possible to quantify	176.46			Within permissible limits
PM2.5($\mu\text{g}/\text{m}^3$)		38.96			
PM10($\mu\text{g}/\text{m}^3$)		93.83			
SO2($\mu\text{g}/\text{m}^3$)		13.36			

PART-D
HAZARDOUS WASTE

(As specified under hazardous Waste Management & Handling Rules,1989)

Hazardous Waste	Total quantity (kg)	
	During the financial year (2023-24)	During the financial year (2024-25)
a). From Process:		
i) Burnt Oil recovered in workshop	28530 ltrs.	21770 ltrs.
ii) oil-soaked filters	310 nos.	230 nos.
b). From pollution control facilities:		
i)Oil recovery from Oil & Grease Trap	(i) 17Itrs	(i) 16 ltrs.
ii) oily sludge	(ii) 9 m ³ (oily sludge)	(ii) 8 m ³ (oily sludge)
iii) chemical waste (if any)	(iii) Nil	(iii) Nil

PART-E
Solid Waste (Other than Hazardous)-ok

Particulars	Total Quantity	
	During the current financial year (2023-24)	During the current financial year (2024-25)
a) From Process (Topsoil and over burden)	8.384 Mil m ³	8.526 Mil m ³
b) From pollution control facilities (STP & MDTP sludge)	24.00 m ³	23.98 m ³
c) 1. Qty. Recycled or reutilized within the unit	8.781 Mil m ³	8.780 Mil m ³
2. Sold	-	-
3. Disposed	24.00 m ³ used as manure	23.98 m ³ used as manure

Buddhi

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 Waste:

Name of Hazardous Waste	Qty. generated during the year 2023-24	Disposal Practices
Burnt oil etc. (Liter), (from W/Shop)	21770 ltrs.	By auction to authorized parties.
Oil soaked filters(nos) From workshop	230 nos.	Stored in an impervious lined pit under covered shed.
Oil & Grease (kg) (from ETP / OGT)	16Itrs	Do
Oily sludge (M ³) (from ETP / OGT)	8 m ³	Stored in an impervious lined pit under covered shed.
Oil emulsion	nil	-----
Chemical waste if any(kg)	nil	-----
Battery (nos)	57 nos.	By auction to authorized parties.

(II) Solid Wastes:

Solid waste	Qty. generated during the year 2024-25	Disposal Practices
Topsoil (m ³)	22170 (m ³)	Spread over old OB dump
OB (m ³)	8504164 (m ³)	Back filled.
STP & Sed- Pond Sludge	25(m ³)	Used as manure

Land Reclamation & OB disposal: Progressive till March -2025

	Area (Ha)	OB Volume / No. of Plants
1)External OB dump	36.47	5.514 Mm3
2)Excavated Land	398.10	111.52 Mm3
3)Land affected (1+2)	434.57	-
4)Backfilled (out of 2)	319.25	109.638 Mm3
5)Land physically reclaimed (out of 3)	216.63	-
6)Land biologically reclaimed (out of 3)	174.57	298436nos

PART-C

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 CMPDI. The main pollution control measures suggested in EMP along with the measures implemented so far have been summarized in Table 1.1 to 1.3.

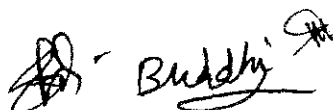
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Table -1.1
AIR POLLUTION CONTROL MEASURES


Sl. No.	EMP Provisions	Whether provided or not
1.	Watering and grading of all roads to minimize air-borne dust from vehicles.	Provided
2.	Biological reclamation of land	Provided
3.	Green Belt around mine & infrastructures	Provided
4.	Drills fitted with dust control devices	Provided
5.	Dust suppression/dust extraction system to be provided in CHP	Provided
6.	Improved maintenance of plant & Machinery	Provided
7.	Mechanized Coal Transportation system	Provided

Table- 1.2
WATER POLLUTION CONTROL MEASURES

Sl. No.	EMP Provisions	Whether provide or not	Remarks
1	Mine water is to be collected in central sump on dip side of Pit. This will not act as sedimentation lagoon.	Provided	3 nos. of worked out quarry are used for water storage.
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 discharged to natural water course.	Provided	
4	Domestic wastewater will be treated in screens, oxidation pond/aerated lagoon. Sanitary waste to be disposed of into septic tank & soak pit.	Provided	1.0 MLD capacity. Of STP/DETP is installed at Jagannath colony.
5	Workshop effluent will be treated in oil and grease trap & sedimentation tank.	Provided	Integrated ETP is provided
6	Zero discharge from Mine shall be maintained	Maintained	
7	Piezometers shall be installed for measurement of underground water depth & its quality	Provided	MTP-04: inside central nursery, beside golf hut.

Table- 1.3
LAND RECLAMATION

Sl. No.	EMP Provisions	Whether provide or not	Remarks
1.	Topsoil management: Proper stripping, Storage and Relocation of topsoil.	Provided	
2.	Physical Reclamation of OB: Proper reshaping and regarding of top surface,	Provided	

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	providing drainage arrangement and topsoil spreading for external and internal dumps.		
3.	Biological Reclamation: Plantation of suitable species of herbs shrubs & indigenous tress over technically reclaimed dumps	Provided	

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of environment management during 2024-25 was **Rs. 35.12 per ton of coal**

PART - H

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

Sl. No.	HEAD	Amount Rs. In Lakhs (approx.)
01.	Plantation & Misc,	218.32
02.	Dust Suppression	205.00
03.	Environmental Monitoring & statutory fees	60.00
04.	Operation and maintenance of ETP, STP & OGT	25.00
05.	Cleaning & maintenance of Coal Transport Road	170.00
06.	Operation and maintenance of Wheel washing system	15.00
07.	Operation and maintenance of Fog canon	50.00
TOTAL		743.32

PART-1

Any other particulars for improving the quality of the environment

1. World Environment Day was celebrated to spread awareness among the employees and nearby villagers on pollution, its mitigation and conservation and to encourage the people to take up tree plantation and its protection.
2. EK MAA KE NAAM was celebrated with plantation of 1500 nos. of fruit bearing Plants and 500 nos. saplings distributed to employees & nearby villagers to increase awareness.

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.

[Handwritten Signature]
29.08.2024

Signature of the Project Officer,
(With seal)

Buddhi

GM(MINING) PROJECT OFFICER
JAGANNATH COLLIERY

SOLENT FEATURES OF JAGANNATH COLLIERY

1. DATE OF OPENING :- 28.01.1971
2. TOTAL LEASE HOLD AREA = 55,945 Ha (Forest land = 40,726 Ha
 & Cont. Land = 08,173 Ha & Treasury land = 08,047 Ha)
3. LOCATION :- LONGITUDE = 86° 13' 8" to 86° 11' 18" E
 LATITUDE = 20° 54' 11" to 20° 47' 24" N
4. NAME OF INDIA TORCHES :- MD-729/1
5. GRADE OF COAL :- G-12
6. REMARKS :- COAL DEPOSITION OF 1000 YRS TO 1500 YRS
7. STRIKE LINE :- EAST - WEST DIRECTION & DIPS TO 1400 N
8. NAME OF SEAM :- TALCHER SEAM - IV to SEAM III, out of which seam - IV to SEAM - II are thick seams (> 10 m)
9. NO. OF FAULT :- 11 NOSE (dip varying from 5m to 10m)
10. DEPTH OF QUANTY :- 50M TO 160M
11. STRIPPING RATIO :- 1:07 (Average)
12. BALANCE COAL RESERVES :- 34.08 MT (AS ON 01.04.2025)
13. TOTAL COAL PRODUCTION SINCE INCEPTION :- 207.28 MCMH
 UPTO 31.03.2025
14. BALANCE ON RESERVES :- 7.50 MCMH UPTO (AS ON 01.04.2025)
15. TOTAL COAL PRODUCTION SINCE INCEPTION :- 125.41 MCMH
 UPTO 31.03.2025
16. LIFE OF MINE :- 05 YEARS UPTO 01.04.2025 @ 7.5 MTP.
17. ENVIRONMENTAL CLEARANCE :- FOR 7.5 MTP (RE-146/14)
18. CTO :- VALID UPTO 31.03.2025 FOR 7.5 MTP.
19. CTE :- LIFE TIME VALID FOR 7.5 MTP.

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1.00	INDIA BOUNDARY
01	LOCAL EXTRACTORY LINE
02	DR TOY ROAD LINE
03	PUBLIC ROAD
04	WATER ROAD
05	RAIL TRACKS
06	RAILWAY AREA
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MAHANADI COAL FIELDS LIMITED
 JAGANNATH AREA
 JAGANNATH COLLIERY
 55,945 Hectares
 MD-729/1
 DATE: 28.01.1971
 SCALE: 1:50,000
 PROJECT NO. 100/1971
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]