

FORM-V

ENVIRONMENTAL STATEMENT

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

Part – A

- i) Name & Address of the owner/ occupier : Ashish Ranjan
of the industry operation or process : Project Officer, Lingaraj OCP
(Name of the Project Officer/ Sub-Area : Office of the Project Officer
Manager & Office address to be given) P.O.: Deulbera Colliery, Talcher
Distt.: Angul, Odisha-759102
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production : 20 MTY(18.20 MT)
during the year 2024-25)
- iv) Year of establishment : 1991
- v) Date of the last Environmental : 28.09.2024
Statement submitted

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 Cu-m/ day
1. a	Haul Road Dust Suppression	3784
b	Dust Suppression at CHP, Silo & Conveyor belt	2431
c	Dust Suppression at Siding	1874
d	Fire Fighting	325
e	Workshop	70
f	Others	196
2.	Domestic	---
3.	Total in kℓ/ day	8680

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2023-24	2024-25
Coal	180.50	174.12

(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)	1.03	1.253
Petrol (ℓ/ t)	0.0003	0.0001
Lubricants (ℓ/ t)	0.02	0.027
Electricity (Units/ t)	2.54	2.907
Explosives (kg/ t)	0.23	0.308

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
		Mine Effluent	OGT Outlet	STP Outlet	
Water (annual average)					
	Nil	Mine Effluent	OGT Outlet	STP Outlet	Within the prescribed standards
TSS (mg/ℓ)		40	38	34	
BOD (mg/ℓ)		---	---	< 2	
COD (mg/ℓ)		35	39	---	
pH		7.17	7.30	7.48	
O & G (mg/ℓ)		< 4	< 4	---	
Air (Ambient air quality of one station-annual average)– Near Lingaraj to Dera Road					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	245			Within the prescribed standards
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		129			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		60			
SO ₂ ($\mu\text{g}/\text{m}^3$)		14			
NO _x ($\mu\text{g}/\text{m}^3$)		21			

Part – D
Hazardous Wastes

As specified under Hazardous and other Wastes (Management & Transboundary Movement) Rules, 2016

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	142326kg	44280kg
ii. Oil soaked filters	900kg	600kg
(b) From pollution control facilities:		
i. Oil / Oil emulsion recovery from Oil & Grease Trap	18 kg (Oil)	7.2 kg (Oil)
ii. Oily sludge	3000 kg	2200 kg
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)	13.034 Mm ³	14.701 Mm ³
(b) From pollution control facilities (STP & Sed-Pond Sludge)	Nil	Nil
(c) 1- Quantity recycled or re-utilized (OB back-filled)	13.034 Mm ³	14.701 Mm ³
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)	44280kg	By auction to authorized parties.
Oil soaked filters(kg) (from W/Shop)	600kg	Stored in impervious lined pit.
Oil & Grease (kg) (from ETP/ OGT)	7.2 kg (Oil)	By auction to authorized parties.
Oily Sludge (kg) (from ETP/ OGT)	2200 kg	Stored in impervious lined pit.
Oil emulsion	---	---
Chemical Waste if any (kg)	---	---
Battery (nos.)	179nos.	By auction to authorized parties.

(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2024-25	Disposal Practices
Top Soil (Mm ³)	0.018Mm ³	Spread over the backfilled area for plantation.
OB (Mm ³)	14.683Mm ³	Used to fill quarry voids.
STP & Sed-Pond Sludge	---	---

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

	Area (Ha.)	OB Volume/ Nos. of Plants
1) External OB dump	108.88	47.98 Mm ³ /302525nos.
2) Excavated land	442.00	254.351 Mm ³
3) Land affected (1+2)	550.88	---
4) Backfilled (out of 2)	155.00	188.626Mm ³ / 103102nos.
5) Land physically reclaimed (out of 3)	*146.11	---
6) Land biologically reclaimed (out of 3)	*146.11	405627nos.

* 146.11 Ha. reclaimed area includes 37.23 Ha. of reclaimed backfilled area and 108.88 Ha. of reclaimed external OB dump area. The 146.11 Ha. area has been taken in to account for the calculation of physical reclamation and also for biological reclamation.

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	
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.	Scheduled maintenance is carried out.	
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	Domestic waste water is disposed in STP.
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	MTP 01: Near the premises of Mandapal Hospital. MTP 04: Inside Central Nursery (beside golf hut), Jagannath Area

Table – 1.3
Land Reclamation

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1	Top soil Management: Proper stripping, Storage, and Relocation of top soil.	Provided	
2	Physical Reclamation of OB Dump: Proper reshaping and re-grading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.	Provided	
3	Biological Reclamation: 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.12.18 per tonne of Coal.

Part – H

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

Head	Amount Rs. (approx)
Tree plantation	120 lakhs
Statutory Expenses	200 lakhs
Air Quality Management	1500 lakhs
Water quality management	15 lakhs
Environmental monitoring cost	165 lakhs
Environment Awareness Programmes	5 lakhs
Total	2005 lakhs

Part – I

Any other particulars for improving the quality of the environment

Various competitions among the children, employees and family members of employees were carried out on the occasion of World Environment Day 2024 to increase awareness about pollution control measures.

Note: A plan is attached herewith showing the relevant features like Present Working/ Quarry, External Dump, Back-filling, Plantation, Sedimentation Pond/ MDTP, Oil & Grease Trap/ ETP, Workshop, CHP etc. and Environmental Monitoring Stations.


Signature of the Project Officer.

P.O. लिंगराज (with seal).
PROJECT OFFICER
LINGARAJ O.C.P

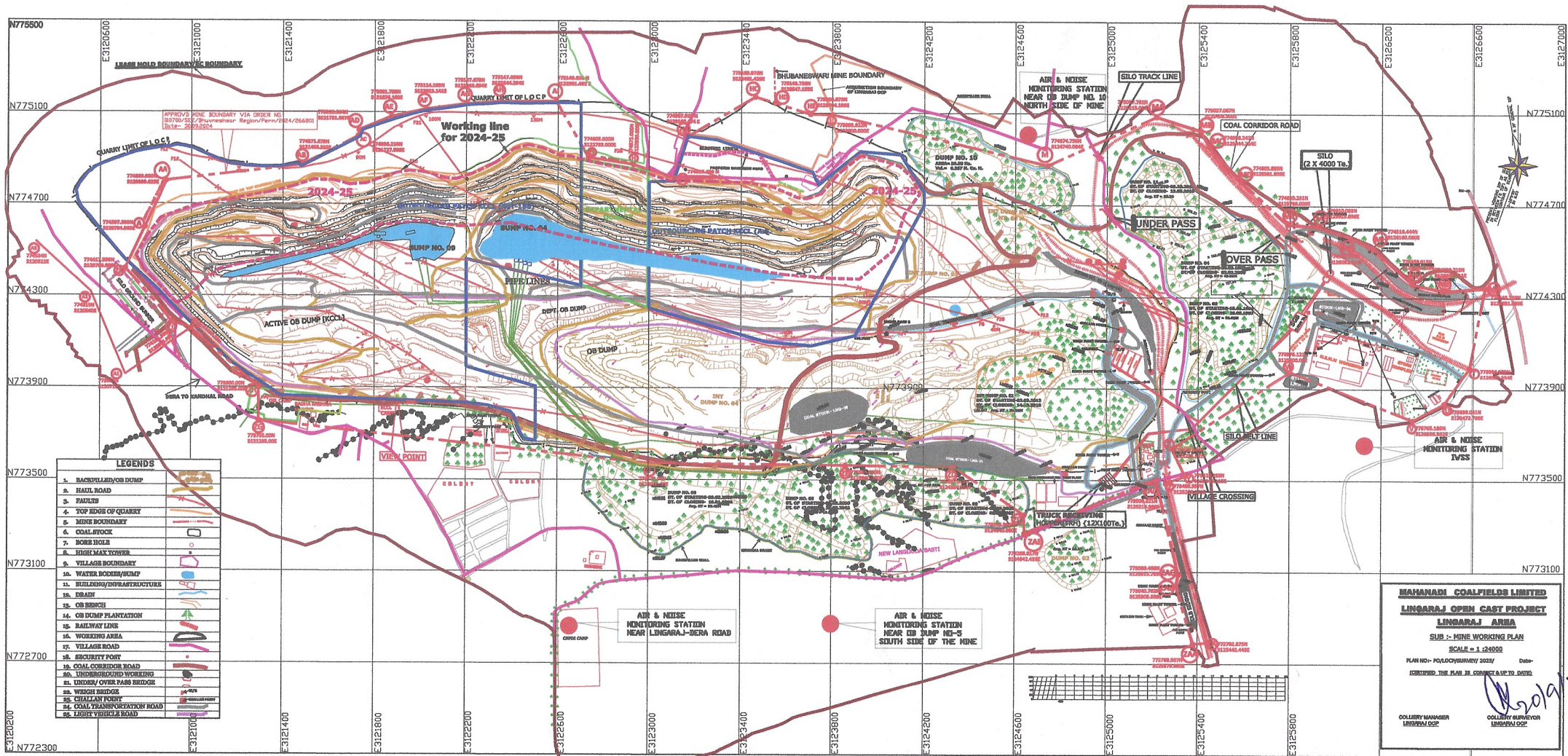
COST OF ENVIRONMENTAL MANAGEMENT FOR THE YEAR 2024-25

IN RESPECT OF LINGARAJ OCP

Sl. No.	Details of Expenditure	Amount
1	CTO fees	Rs. 80 lakhs
2	CGWA NOC Fees	Rs. 107.70 lakhs
3	Purchase of mobile water sprinklers	Rs. 487.78 lakhs
4	Dust suppression by mobile water tankers, mobile fog canon, mechanical road sweeper and wheel washing system (operation and maintenance)	Rs. 1309.35 lakhs
5	Other works related to air quality management	Rs. 16.46 lakhs
6	Works related to water quality management	Rs. 34.82 lakhs
9	Tree plantation including sapling distribution	Rs. 75.25 lakhs
10	Environmental monitoring works	Rs. 177.67 lakhs
11	Environmental awareness programmes	Rs. 2.49 lakhs
	Total	Rs. 2216.86 lakhs
	Cost of Environmental Management per unit tonne of Coal production (Coal production during the year 2024-25 was 18195202.90 tonnes)	Rs. 12.18 per tonne of coal


Signature of the Project Officer.

(with seal)
परियोजना अधिकारी
लिंगराज ओ.सी.पी.
PROJECT OFFICER
LINGARAJ O.C.P



LEGENDS

1. BACKFILL/OB DUMP	[Symbol]
2. HAUL ROAD	[Symbol]
3. FAULTS	[Symbol]
4. TOP EDGES OF QUARRY	[Symbol]
5. MINE BOUNDARY	[Symbol]
6. COAL STOCK	[Symbol]
7. BORE HOLE	[Symbol]
8. HIGH MAST TOWER	[Symbol]
9. VILLAGE BOUNDARY	[Symbol]
10. WATER BODIES/STREAM	[Symbol]
11. BUILDINGS/INFRASTRUCTURE	[Symbol]
12. BRIDGE	[Symbol]
13. OB BRIDGE	[Symbol]
14. OB DUMP PLANTATION	[Symbol]
15. RAILWAY LINE	[Symbol]
16. WORKING AREA	[Symbol]
17. VILLAGE ROAD	[Symbol]
18. SECURITY FENCE	[Symbol]
19. COAL CORRIDOR ROAD	[Symbol]
20. UNDERGROUND WORKING	[Symbol]
21. UNDER OVER PASS BRIDGE	[Symbol]
22. WOODEN BRIDGE	[Symbol]
23. CHALLAN FERRY	[Symbol]
24. COAL TRANSPORTATION ROAD	[Symbol]
25. LONG VEHICLE ROAD	[Symbol]

MAHANADI COALFIELDS LIMITED
LINGARAJ OPEN CAST PROJECT
LINGARAJ AREA
 SUB - MINE WORKING PLAN
 SCALE = 1:24000
 PLAN NO. - POL/OC/WORKING/2023/ Date: _____
 (FORGET THE PLAN IS CORRECT & UP TO DATE)
 COLLIERY MANAGER LINGARAJ OCP COLLIERY SUPERVISOR LINGARAJ OCP

2019/25