

FORM-V

Environmental statement for the financial year ending 31st March, 2024

Part – A

- i) Name & Address of the owner/ occupier : **Shri V.K. Singh,**
of the industry operation or process **Project Officer,**
(Name of the Project Officer/ Sub-Area **Lakhanpur Opencast Project,**
Manager & Office address to be given) **P.O. Ubuda, VIA- Belpahar,**
Jharsuguda, Odisha- 768214
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production
During the year 2023-24) : 22.5 MT (22499997.91 tons)
- iv) Year of establishment : 1991
- v) Date of the last Environmental
Statement submitted : 22 September, 2023

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	5880
b	Dust Suppression at CHP	0
c	Dust Suppression at Siding	2663
d	Fire Fighting	650
e	Workshop	225
f	Others	0
2.	Domestic	300
3.	Total in kℓ day	9718

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2022-23	2023-24
Coal	156.22	157.64

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

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2022-23	2023-24
H.S. Diesel (ℓ/ t) (dept. +cont.)	1.936	2.10
Petrol (ℓ/ t)	--	--
Lubricants (ℓ/ t) (dept. +cont.)	0.020	0.016
Electricity (Units/ t) (dept. +cont.)	0.79	0.90
Explosives (kg/ t)	0.737	1.25

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
Water (annual average)					
	Not possible to quantify	Outlet of Secondary Sedimentation Tank	Outlet of ETP	Mine sump water	Within standard limits
TSS (mg/ℓ)		38.16	37.5	29.5	
BOD mg/ℓ					
COD (mg/ℓ)		27.66	28.0	19.0	
pH		7.11	7.26	7.11	
O & G (mg/ℓ)		<4.0	<4.0	<4.0	
Air (Ambient air quality of one station – annual average) Near Lilari Nallah Pump House					
PM _{2.5} (µg/m ³)	Not possible to quantify		46.875		Within standard limits
PM ₁₀ /RPM (µg/m ³)			117.45		
SPM (µg/m ³)			211.29		
SO ₂ (µg/m ³)			13.90		
NO _x (µg/m ³)			15.17		

Part – D**Hazardous Wastes**

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

Hazardous Waste	Total Quantity (kg)	
	During the financial year 2022-23	During the financial year 2023-24
(a) From process:		
i. Burnt Oil in Workshops	1,28,940 Lts	89250 Lts
ii. Oil-soaked filters	3473 Nos.	3666 Nos.
(b) From pollution control facilities:		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	290 Ltr	298 Ltr
ii. Oily sludge	242 m ³	14.15 m ³
iii. Chemical Waste (if any)	Not applicable	Not applicable

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Part – E
Solid Wastes (other than hazardous)

Particulars	Total Quantity	
	During the financial year 2022-23	During the financial year 2023-24
(a) From process (Top soil and Over burden)	56.178 Mm ³	64.91 Mm ³
(b) From pollution control facilities (STP)	Nil	Nil
Sedimentation pond sludge	3900 m ³	590 m ³
(c) 1- Quantity recycled or re-utilized (OB back-filled)	56.178 Mm ³	60.35 Mm ³
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 wastes.

(I) Hazardous Wastes:

Name of Hazardous Wastes	Quantity generated in the year 2023-24	Disposal Practices
Burnt Oil, etc. (l) (from W/Shop)	89250 L	Stored in barrels under covered shed and sold to authorized recyclers through auction.
Oil-soaked filters(kg) (from W/Shop)	3666 Nos.	Excess oil is removed from filters and disposed in impervious lined pit
Oil & Grease (kg) (from ETP/ OGT)	298 L	Collected and Stored in barrels under covered shed and sold to authorized recyclers through auction.
Oily Sludge (te.) (from ETP/ OGT)	14.15 m ³	Dried off in bed and disposed in impervious lined pit
Oil imulsion	Nil	Not applicable
Chemical Waste if any (kg)	Nil	Not applicable
Battery (nos.)	56 Nos.	Stored in separate battery storage room and sold to authorized recyclers

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

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(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2023-24	Disposal Practices
Top Soil (m ³)	4564602.49	Spread over the backfilled area
OB (m ³)	60351677.39	Used for backfilling of quarry voids
STP & Sed-Pond Sludge	590 m ³	Used as manure

Land Reclamation & OB disposal – progressive till March, 2024:

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	17.5 Ha	1.94 Mm ³ / 43750
2) Excavated land	1027.72 Ha.	
3) Land affected (1+2)	1045.22 Ha.	-
4) Backfilled (out of 2)	664.48 Ha.	
5) Land physically reclaimed (out of 3)	305.37 Ha	-
6) Land biologically reclaimed (out of 3)	147.20 Ha.	5,12,094 Plants

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	Fixed sprinklers and both departmental and contractual water tankers have been deployed
2	Biological reclamation of land.	Provided	187.915 Ha.including external ob dump and avenue plantation have been biologically reclaimed since inception
3	Green belt around mine & infrastructures.	Provided	Dense plantation have been developed around the mine boundary
4	Drills fitted with dust control devices.	Provided	Dust extractor have been provided
5	Dust suppression/ dust extraction system to be provided in CHP.	Not Applicable	CHP closed
6	Improved maintenance of plant & machinery.	Provided	Scheduled maintenance is being carried out
7	Mechanized coal transportation system.	Provided	Rail transport capacity increased.

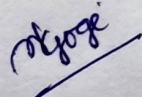


Table – 1.2
Water Pollution Control Measures

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	Quarry void is used as mine sump
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provided	Garland drains channelized to mine sumps
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	Garland drains channelized to mine sumps
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 for three projects under Lakhanpur Area administrative control
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	2 ETP's of 240 m ³ /day and one ETP of 50 KLD has been renovated with state art of technology
6	Zero discharge from mine shall be maintained.	Provided	Mine water is being stored and used for various mining activities.
7	Piezometers shall be installed for measurement of under-ground water depth and its quality	Provided	MIP 09 - Village Junion; Inside the premises of State Govt. Horticulture institute, and MIP 10 – Village dahaldera; Inside the premises of UP school.

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	Spread over backfilled area
2	Physical Reclamation of OB Dump: Proper reshaping and regrading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.	Provided	305.37 Ha. area technically reclaimed since inception
3	Biological Reclamation: Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Provided	187.91 Ha area biologically reclaimed since inception

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION:

Cost of environmental management during 2023-24 was Rs. 20.19 per tonne of Coal.

Part – H

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

The Lakhanpur Opencast Project has been amalgamated into the Integrated-Lakhanpur-Belpahar-Lilari Opencast Project (40.0 MTPA) and the Integrated-Lakhanpur-Belpahar-Lilari Opencast Project has started its operations from 27.03.2024. Additional environmental protection measures/investment will be taken in the Integrated-Lakhanpur-Belpahar-Lilari Opencast Project.

Part – I

Any other particulars for improving the quality of the environment.

1. Plantation of 76,000 nos. of saplings under Urban Sector plantation scheme over an area of 60.5 Ha.
2. Installation of new ETP of 10 KLD capacity workshop in contractor camp.
3. Ground water level and quality monitoring by Piezometer.
4. Erection of Wind barrier and development of vertical greenery at siding no.3 and New Y Curve Siding
5. Awareness program to employees and public through various programs.

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.

M. Jogi → Signature of the Project Officer.
Lakhanpur Opencast Project
(with official seal)

G.M (Min) / Project Officer
Integrated LBL OCP
Lakhanpur Area MCL

Expenditure for Environment Management in 2023-24

Sl.No.	Works	Expenditure (Rs.)
1.	CTO charges	9000000
2.	CMPDI Environmental Monitoring	18543588.79
3.	Plantation	89055639
4.	Dam Division fees	6926274
5.	Mechanical Road Sweepers	23901696
6.	Wheel Washing System	13994435.00
7.	Wind Barrier At Railway Siding	106263856.39
8.	Mobile Fog Cannons	146764800
9.	Continuous Ambient Air Quality Monitoring Station	18069132
10.	Sedimentation tanks	17753720.74
11.	ETP Maintenance	619760.20
12.	Housekeeping	3599000
	Total	454491902.12

M. J. Singh

Wf
20/9/24

Project Officer
Lakhanpur Opencast Project
G.M (Min) / Project Officer
Integrated LBL OCP
Lakhanpur Area MCL

