ENVIRONMENTAL STATEMENT

(Form – V)

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

Lilari Opencast Mine

For the year 2022-23

Mahanadi Coalfields Ltd.

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

FORM-V

ENVIRONMENTAL STATEMENT

Environmental statement for the financial year ending 31st March, 2023

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)	: **Sri Virendra Kumar Singh, Project Officer, Lilari Opencast Project, P.O. Jorabaga, Via- Belpahar, Jharsuguda, Odisha- 768217**
ii)	Industry Category	: Primary (Coal Mining Operation)
iii)	Production Capacity (Coal production during the year 2022-23)	: Nil (Mine has been discontinued from 01.04.2018)
iv)	Year of establishment	: 1988
v)	Date of the last Environmental Statement submitted	: 16th September, 2022

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	00
b	Dust Suppression at CHP	-
c	Dust Suppression at Siding	-
d	Fire Fighting	00
e	Workshop	00
f	Others	-
2.	Domestic	00
3.	**Total in kℓ/ day**	**00**

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2021-22	2022-23
Coal	00	00

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

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2021-22	2022-23
H.S. Diesel (ℓ/ t) (dept. +cont.)	Nil	Nil
Petrol (ℓ/ t)	Nil	Nil
Lubricants (ℓ/ t) (dept. +cont.)	Nil	Nil
Electricity (Units/ t) (dept. +cont.)	Nil	Nil
Explosives (kg/ t)	Nil	Nil

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)					
		MDTP	**OGT Outlet 1**	**Mine sump water**	
TSS (mg/ℓ)	Not possible to quantify	--	--	--	Within standard limits
BOD mg/ℓ)		--	--	--	
COD (mg/ℓ)		--	--	--	
pH		--	--	--	
O & G (mg/ℓ)		--	--	--	
Air (Ambient air quality of one station – annual average) Near Lilari Nallah Pump House					
$PM_{2.5}$ ($\mu g/m^3$)	Not possible to quantify	38.41			Within standard limits
PM_{10}/RPM ($\mu g/m^3$)		90.16			
SPM ($\mu g/m^3$)		175.16			
SO_2 ($\mu g/m^3$)		14.75			
NO_x ($\mu g/m^3$)		24.16			

Part – D
Hazardous Wastes

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

Hazardous Waste	Total Quantity (kg)	
	During the financial year 2021-22	During the financial year 2022-23
(a) From process:		
i. Burnt Oil in Workshops	Nil	Nil
ii. Oil-soaked filters	Nil	Nil
(b)From pollution control facilities:		
i. Oil/ Oil emulsion recovery from Oil & Grease Trap	Nil	Nil
ii. Oily sludge	Nil	Nil
iii.Chemical Waste (if any)	Nil	Nil

Part – E

Solid Wastes (other than hazardous)

Particulars	Total Quantity	
	During the financial year 2021-22	During the financial year 2022-23
(a) From process (Top soil and Over burden)	Nil	Nil
(b) From pollution control facilities (STP)	Nil	Nil
Sedimentation pond sludge	Nil	Nil
(c) 1- Quantity recycled or re-utilized (OB back-filled)	Nil	Nil
2- Sold	Nil	Nil
3- Disposed	Nil	Nil

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 2022-23	Disposal Practices
Burnt Oil, etc. (ℓ) (from W/Shop)	Nil	Mine has been discontinued from 01.04.2018.
Oil-soaked filters(kg) (from W/Shop)	Nil	Mine has been discontinued from 01.04.2018.
Oil & Grease (kg) (from ETP/ OGT)	Nil	Mine has been discontinued from 01.04.2018.
Oily Sludge (te.) (from ETP/ OGT)	Nil	Mine has been discontinued from 01.04.2018.
Oil imulsion	Nil	Mine has been discontinued from 01.04.2018.
Chemical Waste if any (kg)	Nil	Mine has been discontinued from 01.04.2018.
Battery (nos.)	Nil	Mine has been discontinued from 01.04.2018.

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

(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2022-23	Disposal Practices
Top Soil (m^3)	Nil	Mine has been discontinued from 01.04.2018
OB (m^3)	Nil	Mine has been discontinued from 01.04.2018
STP & Sed-Pond Sludge	Nil	Mine has been discontinued from 01.04.2018

Land Reclamation & OB disposal – progressive till March, 2023:

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	25.40	1.37 Mm^3/ 72251
2) Excavated land	60.30	19.92 Mm^3
3) Land affected (1+2)	85.70	-
4) Backfilled (out of 2)	41.47	18.42 Mm^3
5) Land physically reclaimed (out of 3)	26.00	-
6) Land biologically reclaimed (out of 3)	51.40#	130266 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.	Not applicable	Mine has been discontinued from 01.04.2018.
2	Biological reclamation of land.	Provided	
3	Green belt around mine & infrastructures.	Provided	
4	Drills fitted with dust control devices.	Not applicable	
5	Dust suppression/ dust extraction system to be provided in CHP.	Not Applicable	No CHP
6	Improved maintenance of plant & machinery.	Not Applicable	
7	Mechanized coal transportation system.	--	

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	Project report of Lilari OCP was approved up to 31.03.2018. Mine has been discontinued from 01.04.2018. Further, the mine will be a part of Integrated Lakhanpur-Belpahar-Lilari project as per approved PR. All run-off water is allowed to accumulate in mine sump.
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	Project report of Lilari OCP was approved up to 31.03.2018. Mine has been discontinued from 01.04.2018. Further, the mine will be a part of Integrated Lakhanpur-Belpahar-Lilari project as per approved PR. All run-off water is allowed to accumulate in mine sump.
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	Common township with Integrated township of Lakhanpur Area.
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Not applicable	
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	MIP-06 near Project Office Lilari OCP

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.	--	
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	
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 2022-23 was Rs. 10.19 Lakhs.

Part – H

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

Head	Amount Rs. (approx.)
CTO charges	75000
CMPDI Environmental Monitoring	944549

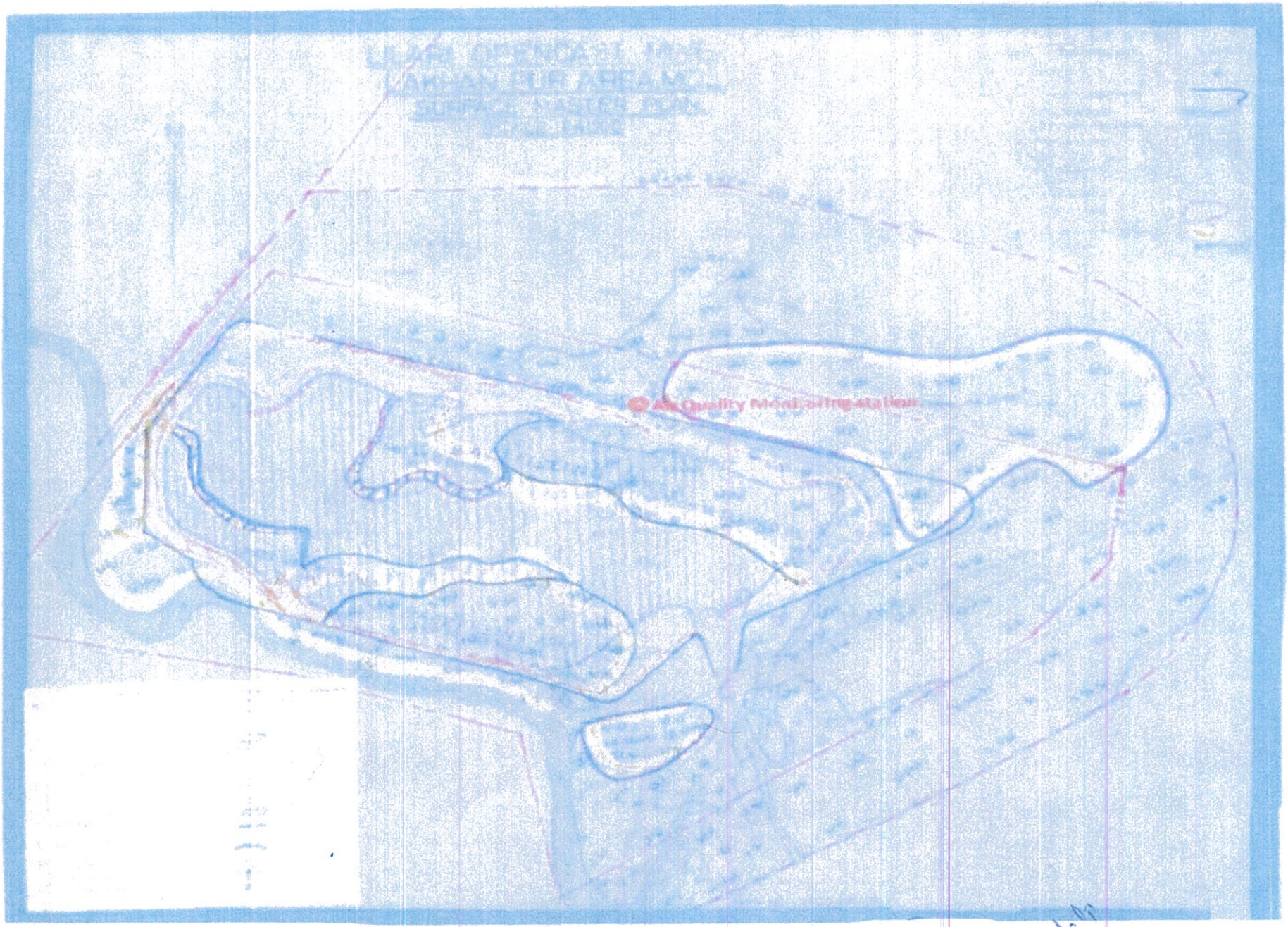
Part – I

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.**

19/12

Project Office
Lakhanpur OCP/Lilari OCP
Project Officer
Lakhanpur OCP
Lakhanpur Area, MCL



01/9/23

Project Officer
Lakhanpur OCP
Lakhanpur Area.MCL