

FORM-V

ENVIRONMENTAL STATEMENT

Environmental statement for the financial year ending 31st March, 2022

PART-A

1.	Name of 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 Gangadhar Mahto Chief Manager /Sub Area Manager , Orient Sub-Area ,Mine no.- 3 Post: Orient Colliery , Brajrajnagar Dist: Jharsuguda , Odisha
2.	Industry Category:	Primary (Coal Mining Operation)
3.	Production Capacity (Coal Production during: the year (2020-21)	0.69 MTPY (NIL) But coal transport of 5769.04 te from OC-3 mine to LOCM-II siding quantity was done.
4.	Year of Establishment:	1968
5.	Date of the last Environmental Statement: submitted	23 rd September 2021

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 m ³ /Day
1.a	Haul Road Dust Suppression	25
b	Dust Suppression at CHP/ Surface bunker	-
c	Dust Suppression at Siding	-
d	Fire Fighting	05
e	Workshop	05
f	Others	20
2.	Domestic	-
3.	Total in Kl./Day	55 Kl./ day

Name of Product	Water Consumption per unit of product (l/t)	
	2020-21	2021-22
COAL	1670.76	3,479.78 (Water consumption per Te coal transported)

(II) Raw Material Consumption (Per tonne of Coal):

Name of Raw Material	Consumption of Raw Material (per tonne of coal produced)	
	2020-21	2021-22
H. S. Diesel (l/t)	0.32 (Departmental + Contractual)	2910 Ltr., (for transportation of balance coal of 2020-21 to Rly siding) Production- NIL (Departmental + Contractual)
Petrol (l/t)	0.00	120 Ltr, (for Flame safety Lamp) Production - NIL
Lubricants (l/t)	0.15	200 Ltr. (for pumping operation) Production- NIL
Electricity (KWh/t)	235.07	6569306 kWh, (for pumping operation) Production- NIL
Explosives (kg/t)	0.09	0.00

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 reason
Water (Annual Average)					
		Mine effluent	OGT Outlet	STP Outlet	
TSS (mg/l)	Not possible to quantify	29.75	-	-	Within prescribed standards
BOD (mg/l)		-	-	-	
COD (mg/l)		27.17	-	-	
pH		7.17	-	-	
O & G (mg/l)		<4.0	-	-	
Air (Ambient air quality of one station – annual average) : Orient Mine no. 3					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	233.96			Within prescribed standards
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		142.79			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		46.92			
SO ₂ ($\mu\text{g}/\text{m}^3$)		14.99			
NO _x ($\mu\text{g}/\text{m}^3$)		25.94			

Part-D

Hazardous Wastes

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

Hazardous waste	Total Quantity (kg)	
	During the previous financial year 2020-21	During the financial year 2021-22
(a) From process :		
i. Burnt Oil in Workshops	1.5 kL	NIL
ii. Oil soaked filters	NIL	NIL
iii. Waste containing oil	NIL	NIL
iv. Empty oil barrels	NIL	NIL
(b) From pollution control facilities:		
i. Oil/Oil emulsion recovery from Oil & Grease Trap	Not applicable	Not applicable
ii. Oily sludge	Not applicable	Not applicable
iii. Chemical Waste(if any)	Not applicable	Not applicable

Part-E

Solid Wastes (Other than hazardous)

Particulars	Total Quantity (kg)	
	During the previous financial year 2020-21	During the financial year 2021-22
(a) From process (Top Soil & overburden)	Not applicable	Not applicable
(b) From pollution control facilities (STP & Sed-Pond Sludge)	Not applicable	Not applicable
(c) 1 - Quantity recycled or re-utilized (OB back filled)	Not applicable	Not applicable
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 waste.

(I) Hazardous Waste:

Name of Hazardous Waste	Quantify generated in the year 2021-22	Disposal Practices
Burnt Oil etc (l) (from workshop)	NIL	-
Waste containing oil	NIL	-
Oil soaked filters (kg) (from workshop)	NIL	-
Empty oil barrels	NIL	-
Oil & Grease (kg) (from ETP/OGT)	Not Applicable	-
Oily Sludge (tonne) (from ETP/OGT)	Not Applicable	-
Oil imulsion	Not Applicable	-
Chemical waste if any (kg)	NIL	-
Battery (Nos.)	NIL	-

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

(II) Solid Wastes:

Solid Waste	Quantify generated in the year 2021-22	Disposal Practices
Top Soil (m ³)	Not Applicable	Not Applicable
OB (m ³)	Not Applicable	Not Applicable
STP & Sed-Pond Sludge	Not Applicable	Not Applicable

Land Reclamation & OB disposal – Progressive till March, 2022:

	Area (Ha.)	OB Volume / Nos. of Plants
1) External OB Dump	Not Applicable	Not Applicable
2) Excavated land	Not Applicable	Not Applicable
3) Land affected (1+2)	Not Applicable	Not Applicable
4) Backfilled (Out of 2)	Not Applicable	Not Applicable
5) Land physically reclaimed (out of 3)	Not Applicable	Not Applicable
6) Land biologically reclaimed (out of 3)	Not Applicable	Not Applicable

Part-G

Impact of pollution control measures on conservation of natural resource 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	U/G Mine
2	Biological reclamation of land.	Not Applicable	U/G Mine
3	Green belt around mine & infrastructure.	Provided	-
4	Drills fitted with dust control devices.	-	Not applicable as the production discontinued from dt. 31.03.2021
5	Dust suppression / dust extraction system to be provided in CHP.	-	Not applicable as the production discontinued from dt. 31.03.2021
6	Mechanized coal transportation system.	Provided	No UG transportation but surface coal transportation by covered trucks to Rly. Siding

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 dump on dig side of pit. This will act as sedimentation lagoon.	Provided.	U/G Mine Sump
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Not Applicable.	U/G Mine
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.	Not Applicable.	U/G Mine
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank and soak -pit.	Provided.	Septic Tank & Soak Pit has been provided.
5	Workshop effluents will be treated in Oil & Grease trap & sedimentation tank.	Not Applicable.	U/G Mine
6	Zero discharge from mine shall be maintained	-	U/G Mine
7	Piezometers shall be installed for measurement of under-ground water depth and its quality.	Provided	Piezometer MIP 05 installed Chhualiberna village.

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.	Not Applicable	U/G
2	Physical Reclamation of OB dump: Proper reshaping and regarding of top surface, providing drainage arrangements and top soil spreading for external and internal dumps.	Not Applicable	U/G
3	Biological Reclamation: Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Not Applicable	U/G

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of environmental management during the year 2021-22 was Rs. 49,07,245.83/- but there was no coal production as the production of mine is temporarily discontinued from dt. 01.04.2021.

Part-H

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

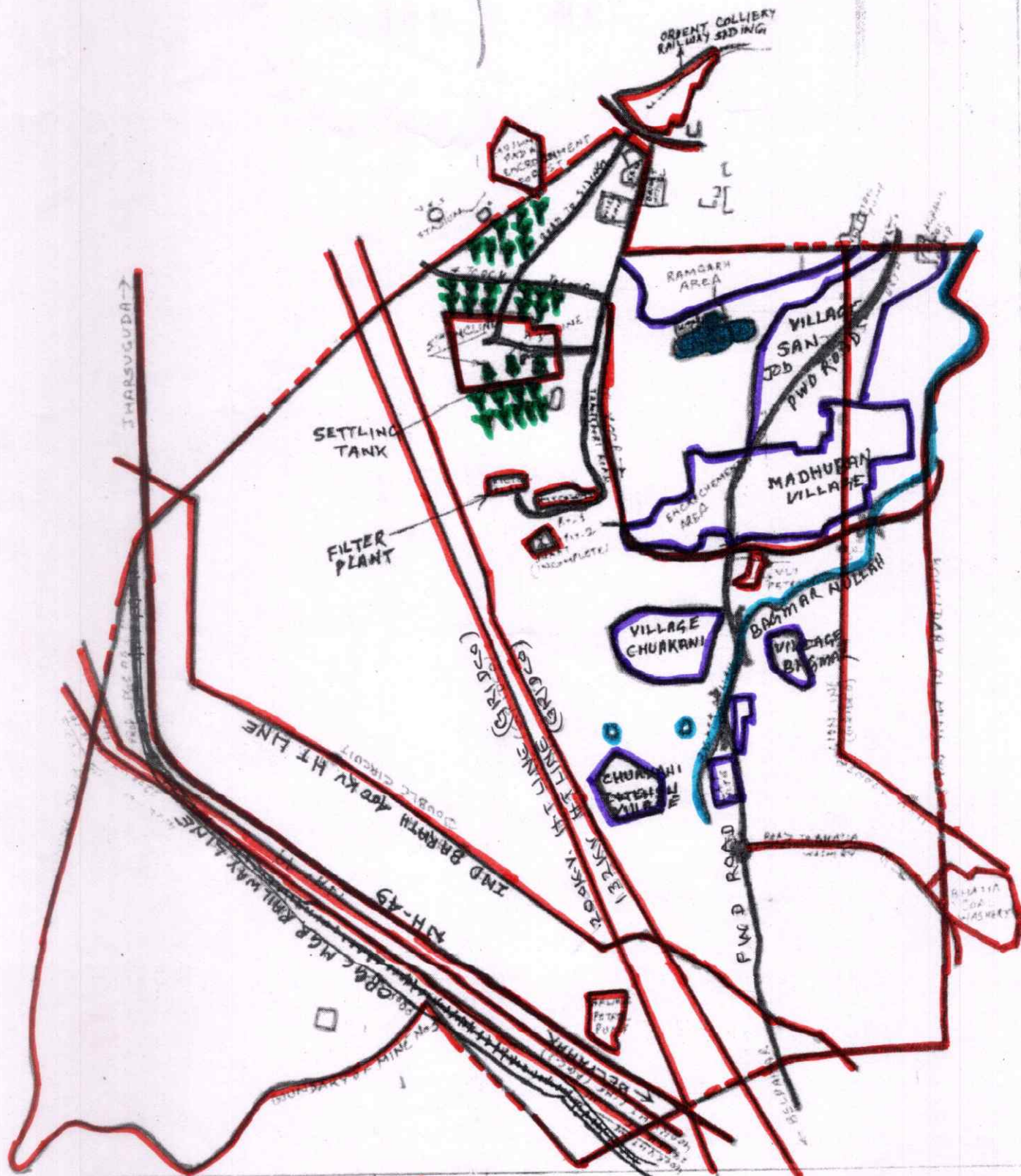
Head	Amount Rs. (Approx.)
Environmental monitoring	12,50,000
Plantation	3,00,000
Consent to Operate fee	2,76,000
Others	0
Total	18,26,000

Part-I

Any other particular in respect of environmental protection and abatement of pollution.

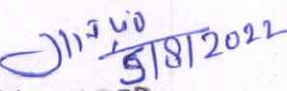
Note: Please attach plan showing the relevant features like Present Working/ Quarry, External Dump, Back filling, Plantation, Sedimentation Pond/MDTP, Oil & Grease Trap/ETP, Workshop, CHP, STP etc. & Environment Monitoring Stations.


Signature of the Project Officer,
 (with seal)
 Chief Manager (Mining)/S.A.M.
 Orient Sub- Area (Orient Area)



AIR/NOISE MONITORING STN		MAHANADI COALFIELDS LIMITED
PLANTATION AREA		ORIENT AREA, MINE NO-3
OFFICE BOUNDARY PREMISES		NOT TO SCALE
POND / TANK		
BAGMAR NULLAH		


 5/18/2022
 SURVEYOR


 5/18/2022
 MANAGER