

FORM-V

ENVIRONMENTAL STATEMENT

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

Part – A

- i) Name & Address of the owner/ occupier : Narayan Prasad Patra
of the industry operation or process Project Officer, KOCP
(Name of the Project Officer/ Sub-Area P.O: Kaniha
Manager & Office address to be given) Dist: Angul, Odisha
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity : 14 MTPA
(Coal production during the year 2021-22) : 10.096 MT
- iv) Year of establishment : 24.11.2010
- v) Date of the last Environmental Statement submitted : 23.09.2021

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):

Ser No.	Industrial/ Mining	Consumption in Cu-m/ day
1. a	Haul Road Dust Suppression	754
b	Dust Suppression at CHP	-
c	Dust Suppression at Siding	1685
d	Fire Fighting	220
e	Workshop	06
f	Others	-
2.	Domestic	03
3.	Total in kℓ/ day	2668

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2020-21	2021-22
Coal	94.78	96.45

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

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2020-21(Dept+cont.)	2021-22(Dept+cont.)
H.S. Diesel (ℓ/ t)	0.788 L/te	0.984 L/te
Petrol (ℓ/ t)	0.00025 L/te	0.00017 L/te
Lubricants (ℓ/ t)	0.018 L/te	0.003 L/te
Electricity (Units/ t)	0.150 Unit/te	0.110 Unit/te
Explosives (kg/ t)	0.173 Kg/te (Only Dept)	0.169 Kg/te (Only Dept)

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)					
		Mine Effluent	OGT Outlet	STP Outlet	All data are within permissible limit.
TSS (mg/ℓ)	Not possible to quantify	43.75	NA	NA	
BOD mg/ℓ)		<2.00	NA	NA	
COD (mg/ℓ)		36.41	NA	NA	
pH		7.37	NA	NA	
O&G (mg/ℓ)		<4.00	NA	NA	
Air (Ambient air quality of one station – annual average)- South of Proposed Quarry					
Limit of KOCP					
PM _{2.5} (μg/m ³)	Not possible to quantify	38.38			All data are within permissible limit.
PM ₁₀ (μg/m ³)		75.95			
SO ₂ (μg/m ³)		17.61			
NO _x (μg/m ³)		30.09			

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 current financial year (2021-22)
(a) From process :		
i. Burnt Oil in Workshops	10500 L	7760 L
ii. Oil soaked filters	375 Kg	1225 Kg
(b) From pollution control facilities:		
i. Oil/ Oil imulsion recovery from Oil & Grease Trap	-	-
ii. Oily sludge	-	-
iii. Chemical Waste(if any)	-	-

Part – E
Solid Wastes (other than hazardous)

Particulars	Total Quantity	
	During the previous financial year 2020-21	During the current financial year 2021-22
(a) From process (Top soil and Over burden)	3.853 Mm ³	7.273(OBR) +0.163 (RH)= 7.436 Mm ³
(b) From pollution control facilities (STP & Sed-Pond Sludge)	NIL	NIL
(c) 1- Quantity recycled or re-utilized (OB back-filled)	2.893 Mm ³	2.329 Mm ³
2- Sold	NIL	NIL
3- Disposed	NIL	NIL

0.163 MCum has been re-handled from external OB which was dumped over internal dump.

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 2021-22	Disposal Practices
Burnt Oil, etc. (ℓ)(from W/Shop)	7760	1540L Sold to authorized recycler and remaining quantity stored under covered shed.
Oil soaked filters(kg) (from W/Shop)	1225	Stored in impervious pit
Oil & Grease (kg)(from ETP/ OGT)	-	-
Oily Sludge (te.) (from ETP/ OGT)	-	-
Oil imulsion	-	-
Chemical Waste if any (kg)	-	-
Battery (nos.)	-	-

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

(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2021-22	Disposal Practices
Top Soil (m ³)	NIL	Stored separately for use in future reclamation.
OB (m ³)	7.273 Mm ³	5.007 Mm ³ kept in External OB dump and 2.266 Mm ³ dumped in backfilling area.
STP & Sed-Pond Sludge	NIL	-

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

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	80.29	26.374 Mm ³
2) Excavated land	194.99	32.336 Mm ³
3) Land affected (1+2)	275.28	-
4) Backfilled (out of 2)	13.63	5.962 Mm ³
5) Land physically reclaimed (out of 3)	NIL	-
6) Land biologically reclaimed (out of 3)	NIL	-

Note: Ext. OB dump area decreased due to re-handling of 0.163 MCum from external dump.

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	Water sprinkling is done by 4 nos of 12 KL mobile Fog Canon & two nos of 12 KL mobile water tankers.
2	Biological reclamation of land.	Not Provided	Dumps are active in nature
3	Green belt around mine & infrastructures.	Provided	By plantation along both sides of CT Road & infrastructure
4	Drills fitted with dust control devices.	Provided	
5	Dust suppression/ dust extraction system to be provided in CHP.	CHP does not exist so far.	
6	Improved maintenance of plant & machinery.	Maintained	Scheduled maintenance is being 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-utilised	Provided	Mine sump acts as water reservoir.
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank & soak-pit.	Not Applicable	Colony not yet constructed.
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Not Provided	Construction of OGT has already been completed.
6	Zero discharge from mine shall be maintained.	Maintained	Permission has been obtained for discharge of mine sump water for a period of 1 year after suitable treatment.
7	Piezometers shall be installed for measurement of under-ground water depth and its quality	Provided	Piezometer (MTP 20) installed at old site office in KOCP.

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	Dumped in a separate specified area and preserved by plantation of leguminous plant.
2	Physical Reclamation of OB Dump:	Not Provided	Presently all

	Proper reshaping and re-grading of top surface, Providing drainage arrangements and top soil spreading on external and internal dumps.		dumps are active.
3	Biological Reclamation: Plantation of suitable species of herbs, shrubs & indigenous trees over technically reclaimed dumps.	Not Provided	Presently all dumps are active.

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

COST OF ENVIRONMENTAL MANAGEMENT DURING 2021-22 was Rs.3.06 per tonne of Coal.

Part – H

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

Head	Amount Rs. (approx)
Cleaning of dust along CT Road	35,00,000.00
Procurement of Fog Canon/Atomizer	55,00,000.00
Plantation	50,00,000.00
Routine Environmental monitoring	15,00,000.00
Fire Fighting	25,00,000.00
Repair & Maintenance of garland drain	30,00,000.00
Wheel washing System	65,00,000.00
Operation and maintenance of fixed sprinklers	25,00,000.00
Installation of fixed type fog canon at siding	25,00,000.00
Supply of water to peripheral villages	45,00,000.00
Statutory Fees	56,00,000.00
TOTAL	561,00,000.00

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.


Signature of the Project Officer.

(with seal)  **प्रियोजना अधिकारी/Project Officer**
कनिहा ओसीपी/Kaniha OCP

