

ENVIRONMENTAL STATEMENT

(Form – V)

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

of

Hingula Opencast Mine

For the year 2022-23



MCL

Mahanadi Coalfields Ltd.

Post: Jagruti Vihar, Burla,

Dist: Sambalpur, Orissa-768020

FORM-V
ENVIRONMENTAL STATEMENT
Environmental statement for the financial year ending 31st Mar, 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) : S.V.Joshi
Project Officer (Hingula OCP)
P.O –Gopal Prasad, Talcher
Dist: Angul, Odisha
Pin: 759103
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production During the year 2022-23) : 15 MTPA (12.38 Million tonne)
- iv) Year of establishment : 1998
- 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	1598
b	Dust Suppression at CHP	---
c	Dust Suppression at Siding & Coal Stock	1615
d	Fire Fighting	56
e	Workshop	50
f	Others	50
2.	Domestic	80
3.	Total in kℓ/ day	3449

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2021-22	2022-23
Coal	153.93	101.69

(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)	1.34	1.01
Petrol (ℓ/ t)	NIL	NIL
Lubricants (ℓ/ t)	0.044	0.031
Electricity (Units/ t)	0.986	0.892
Explosives (kg/ t)	0.950	0.619

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)					
TSS (mg/l)	Not possible to quantify	31	38	NA	Within Prescribed Limit
BOD mg/l)			---		
COD (mg/l)		20	29.167		
pH		7.51	7.79		
O & G (mg/l)		<4.0	<4.0		
Air (Ambient air quality of one station – annual average): Time office					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	175.29			Within Prescribed Limit
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		90.21			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		37.63			
SO ₂ ($\mu\text{g}/\text{m}^3$)		13.39			
NO _x ($\mu\text{g}/\text{m}^3$)		17.45			

Part – D
Hazardous Wastes

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

Hazardous Waste	Total Quantity (kg)	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
(a) From process :		
i. Burnt Oil in Workshops	16435 ltr	15155 ltr
ii. Oil soaked filters	184 nos	172 nos
(b) From pollution control facilities:		
i. Oil/ Oil imulsion recovery from Oil & Grease Trap	930 lit (Oil)	900 lit (Oil)
ii. Oily sludge	36 m ³ (Oily Sludge)	42 m ³ (Oily Sludge)
iii. Chemical Waste(if any)	Nil	Nil

Part – E
Solid Wastes (other than hazardous)

Particulars	Total Quantity	
	During the previous financial year (2021-22)	During the current financial year (2022-23)
(a) From process (Top soil and Over burden)	18.696 Mm ³	16.423 Mm ³
(b) From pollution control facilities (STP & Sed-Pond Sludge)	-----	-----
(c) 1- Quantity recycled or re-utilized (OB back-filled)	18.696 Mm ³	11.623 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 2022-23	Disposal Practices
Burnt Oil, etc. (ℓ) (from W/Shop)	15155 ltr	By Auction to authorized parties
Oil soaked filters(kg) (from W/Shop)	172 nos	Disposed off in impervious lined pit
Oil & Grease (kg) (from ETP/ OGT)	900 lit (Oil)	By Auction to authorized parties
Oily Sludge (te.) (from ETP/ OGT)	42 M ³ (Oily Sludge)	Disposed off in impervious lined pit
Oil imulsion	-----	---
Chemical Waste if any (kg)	-----	---
Battery (nos.)	46 (Nos)	By Auction to authorized parties

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)	0.0375 Mm ³	Spread over OB dump for reclamation
OB (m ³)	16.423 Mm ³	Used to fill the quarry voids
STP & Sed-Pond Sludge	-----	Used as manure

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

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	80.00	32.82 Mm ³
2) Excavated land	425.29	74.013 Mm ³
3) Land affected (1+2)	505.29	-----
4) Backfilled (out of 2)	175.84	41.193 Mm ³
5) Land physically reclaimed (out of 3)	83.58	-----
6) Land biologically reclaimed (out of 3) *11.25 ha OB dumped in external OB dump and 8.87 ha OB dumped in internal dump during 2021-22	20.12	60298

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.	Provided	By scheduled maintenance
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	
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 Balram Colony.
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-14 Inside the premises of Pirakhaman village Primary school MTP -15 Besides Sujan Pradhan's House in Chhotoberani Village near Nalla MTP-16 Backside of Hingula mandir VIP guesthouse

**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 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.3.125 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	40,00,000
Environmental Monitoring	1,30,00,000
Mobiles & fixed water sprinkler and other dust suppression ,measures	2,00,00,000
Road repairing	50,00,000
Catch/Garland drain	3,00,000
Maintenance of Continuous Ambient Air Quality Monitoring Station	3,00,000
ETP	93,00,000
Total	5,19,00,000

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.


 21/08/24
Signature of the Project Officer.

(With seal)

GM (Mining)/Project Officer
Hingula OCP

