

FORM-V

ENVIRONMENTAL STATEMENT

Environmental statement for the financial year ending 31st Mar, 2025

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) Shri Niraj Baran Samal, Project Officer,
Garjanbahal OCP, PO: Basundhara,
Dist.: Sundargarh (Odisha),
Pin: 770076.
- ii) Industry Category : Primary (Coal Mining Operation)
- iii) Production Capacity (Coal production
during the year 2024-25) : 18.20 MTPA (18199916.95 MTe)
-
- iv) Year of establishment : 24.05.2018
- v) Date of the last Environmental
Statement submitted : 28.09.2024

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	1850
b	Dust Suppression at CHP	Not Applicable
c	Dust Suppression at Siding	0
d	Fire Fighting	36
e	Workshop	15
f	Others	0
2.	Domestic	5
3.	Total in kℓ/ day	1901 KI/day

Name of the Product	Water Consumption per unit of product (ℓ/ t)	
	2023-24	2024-25
Coal	41.09	47.39

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

Name of Raw Material	Consumption of Raw Material (per tonne of Coal produced)	
	2023-24(Dept. + Contr.)	2024-25(Dept. + Contr.)
H.S. Diesel (l/t)	1.146	1.146
Petrol (l/t)	Nil	Nil
Lubricants (l/t)	0.013	0.013
Electricity (Units/ t)	0.465	0.466
Explosives (kg/ t)	0.184	0.191

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
Point of examination : Mine Sump water					
		Mine Effluent	OGT Outlet	STP Outlet	The environmental parameters are within permissible limits.
TSS (mg/l)	Not possible to quantify	32	-	-	
BOD mg/l)		-	-	-	
COD (mg/l)		36	-	-	
pH		7.15	-	-	
O & G (mg/l)		<4.0	-	-	
Air (Ambient air quality of one station-annual average) station : Karlikachar					
SPM ($\mu\text{g}/\text{m}^3$)	Not possible to quantify	179			The environmental parameters are within permissible limits.
PM ₁₀ ($\mu\text{g}/\text{m}^3$)		95			
SO ₂ ($\mu\text{g}/\text{m}^3$)		13.76			
NO _x ($\mu\text{g}/\text{m}^3$)		14.02			
PM _{2.5} ($\mu\text{g}/\text{m}^3$)		44			

Part – D**Hazardous Wastes**

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

Hazardous Waste	Total Quantity (kg)	
	During the previous financial year (2023-24)	During the current financial year (2024-25)
(a) From process :		
i. Burnt Oil in Workshops	45000 Ltrs	32000 Ltrs
ii. Oil soaked filters	1530 Nos.	1550 Nos.
(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 previous financial year (2023-24)	During the current financial year (2024-25)
(a) From process (Top soil and Over burden)	15.916 Mm ³	18.148 Mm ³
(b) From pollution control facilities (STP & Sed-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 2024-25	Disposal Practices
Burnt Oil, etc. (l) (from W/Shop)	32000 Ltrs	Transferred to regional store from where it is auctioned to authorized agency.
Oil soaked filters(kg) (from W/Shop)	1550 Nos.	Stored in impervious pit
Oil & Grease (kg) (from ETP/ OGT)	Nil	N.A.
Oily Sludge (te.) (from ETP/ OGT)	Nil	N.A.
Oil imulsion	Nil	N.A.
Chemical Waste if any (kg)	Nil	N.A.
Battery (nos.)	75 Nos.	Transferred to regional store from where it is auctioned to authorized agency.

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

(II) Solid Wastes:

Solid Waste	Quantity generated in the year 2024-25	Disposal Practices
Top Soil (m ³)	0.80 Mm ³	Kept in separate top soil dump for future use.
OB (m ³)	17.348 Mm ³	Dumped in internal as well as external OB dump.
STP & Sed-Pond Sludge	Nil	N.A.

Land Reclamation & OB disposal – progressive till March, 2025:

	Area (ha.)	OB Volume/ Nos. of Plants
1) External OB dump	49.53 Ha	23.290 Mm ³ /25000
2) Excavated land	219.45 Ha	70.675 Mm ³ /Nil
3) Land affected (1+2)	268.98 Ha	Nil
4) Backfilled (out of 2)	98.11 Ha	47.385 Mm ³ /Nil
5) Land physically reclaimed (out of 3)	Nil	Nil
6) Land biologically reclaimed (out of 3)	Nil	Nil

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	The water sprinkling is done by 5 nos of 28 KL water tankers along the haul roads of the mine and coal transport roads involve 3 nos of 12 KL truck mounted fog cannons.
2	Biological reclamation of land.	Provided	Till now safety zone plantation has been conducted along the lease boundary of the mine with approximately 9400 plants. External dump plantation is carried out from 2024-25 with 25000 plants and internal dump plantation shall be taken up after the dump reaches the desired level. Grassing is however developed over all the dumps naturally and by seedball throwing.
3	Green belt around mine & infrastructures.	Provided	Greenbelt will be developed all along the mine lease area in a phased manner and the details regarding the same will be conveyed to the MoEF & CC and its Regional Office from time to time.
4	Drills fitted with dust control devices.	Provided	All the drill are fitted with wet dust extractors for wet drilling.
5	Dust suppression/ dust extraction system to be provided in CHP.	NA	CHP does not exist.
6	Improved maintenance of plant & machinery.	Provided	Integrated HEMM workshop with 29 components is under construction with the desired facilities for plant & machinery.
7	Mechanized coal transportation system.	Provided	Coal transportation system is presently carried out by the tippers for road sale and railway sidings form coal stockyard.

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	A single main sump at the dip side of the pit of approximately 11.7 lakh cu.m capacity acts as minewater reservoir.
2	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provided	Drains constructed.
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	Surface run-off presently flow through the garland drains along the toe of the dumps. Pond construction is under progress with more than 70% work completed by the contractor.
4	Domestic waste water will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank & soak-pit.	-	-
5	Workshop effluents will be treated in oil & grease trap & sedimentation tank.	Provided	ETP with OGT has been newly constructed and provided with integrated HEMM workshop at Garjanbahal OCP.
6	Zero discharge from mine shall be maintained.	Maintained	All the mine water goes to mine sump
7	Piezometers shall be installed for measurement of under-ground water depth and its quality.	Provided	1.MIP 01: Garjanbahal primary school, Garjanbahal 2.MIP 11: Primary school, Karlikachar 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.	Proposed	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.	Under progress	All OB dumps are still active except a patch of external dump recently.
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 2024-25 was Rs 4.45 per Tonne of Coal.

Part – H

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

Head	Amount Rs. (approx)
Wheel Washing System	1,00,10,000.00
Vertical Greenery System	30,93,415.00
Mechanical Road Sweeper	14,592,178.66
Fog Canon	53,10,000.00
ETP & OGT construction	100,00,000.00
Dust suppression (Contractual + Departmental)	37,00,000.00
Garland drains & check dams	2,00,000.00
Consent (SPCB) & NOC (CGWB)	52,01,000.00
Others i.e. up keeping works for aesthetic view	7,00,000.00
Departmental water tankers (Maintenance, POL cost, etc.)	12,00,000.00
Fire tender (Maintenance, POL cost, etc.)	4,00,000.00
Plantation	2,57,25,410.00
Rain water harvesting structure	5,00,000.00
Construction and maintenance of transport roads	1,00,00,000.00
Wind barrier	3,00,00,000.00
Total	12,06,32,003.66

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.

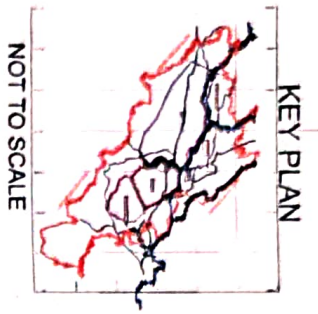
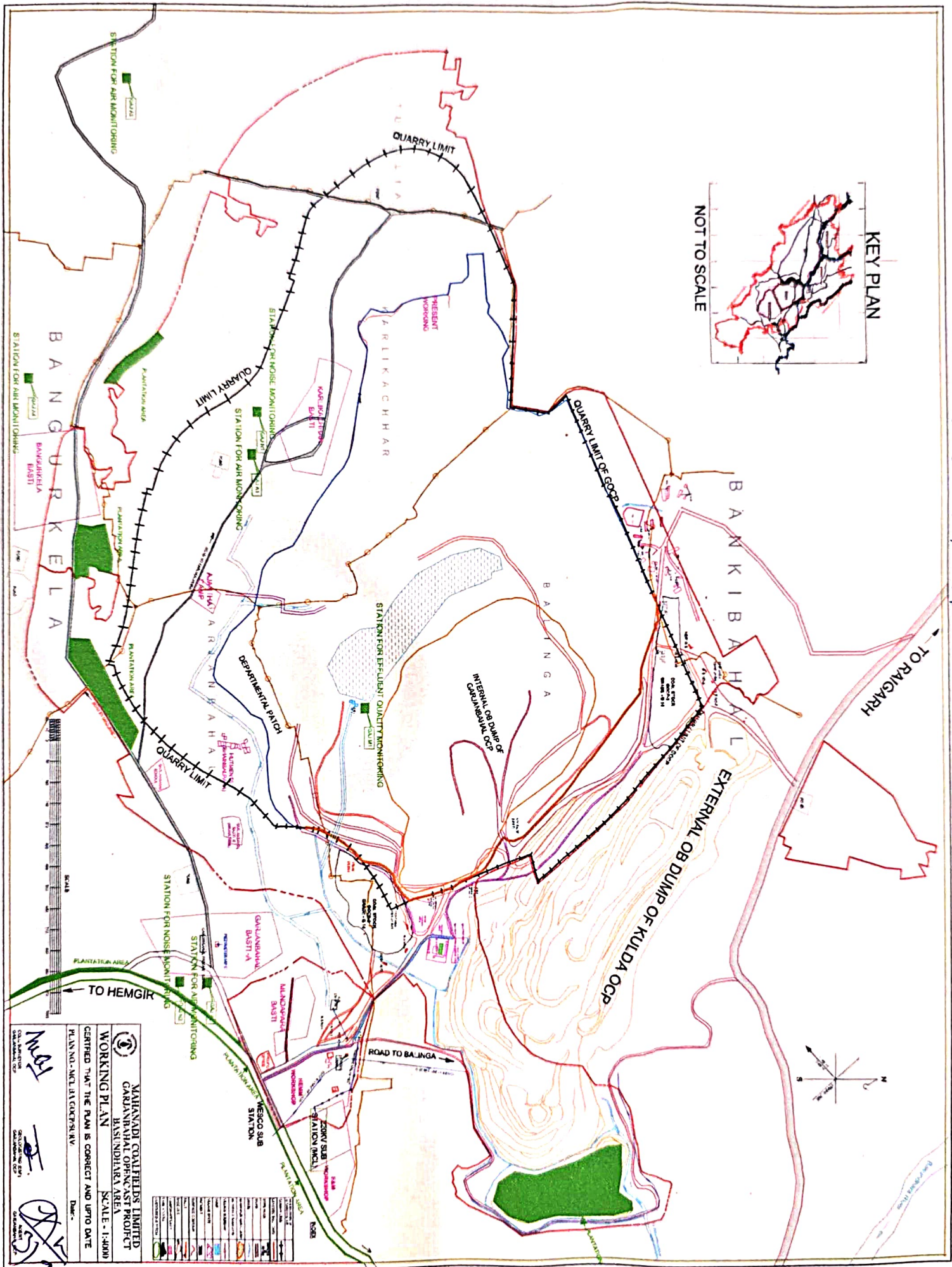


एजेन्ट / परियोजना अधिकारी
AGENT / PROJECT OFFICER



गजसबाहाल ओ.सी.पी.
बसुंधरा क्षेत्र, एम.सि.एल.
GARJANBAHAL OCP,
BASUNDHARA AREA, MCL

PLAN SHOWING GARSANBATHAL OCP.



NO.	DESCRIPTION	DATE	BY	CHECKED BY
1	PRELIMINARY PLAN	10/11/2011
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MAHANADI COALFIELDS LIMITED
 GARDANBHATHAL OPEN CAST PROJECT
 BANSJINDIYAL AREA
 WORKING PLAN
 SCALE - 1:10000
 CERTIFIED THAT THE PLAN IS CORRECT AND UP TO DATE
 PLAN NO. - MCL/JA/GOP/SL/AV
 DATE -
 M. S. J.