

ENVIRONMENTAL STATEMENT

(Form – V)

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

of

Ananta 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 and address of the owner / Occupier of the Industry operation or process (<i>Name of the Project Officer/ Sub-Area Manager & Office address to be given.</i>)	:	Sri- Ajay Kumar Singh Project Officer, Office of the Project Officer, Ananta Opencast Project, P.O. Dera- 759 103, Dist.: Angul, Orissa
(ii)	Industry Category	:	Primary (Coal Mining Operation)
(iii)	(a) Production Capacity	:	20 MTPA
	(b) Coal Production during the year 2021-22	:	17.09 MT
(iv)	Year of Establishment	:	1988
(v)	Date of last Environmental Statement Submitted	:	16.09.2022

PART- B

WATER AND RAW MATERIAL CONSUMPTION


Note: Average Water Consumption in (KL/Day) for the whole year is given. Raw material consumption is given per unit of Coal produced.

(I) WATER CONSUMPTION (KL/DAY):

SL	Industrial / Mining	Consumption in KL/Day
1(a)	Haul Road Dust Suppression	995.00
(b)	Dust Suppression at CHP	110.00
(c)	Dust Suppression at Siding	475.00
(d)	Fire Fighting	160.00
(e)	Workshop	50.00
(f)	Others (Service building, Watering Green Belt etc.)	30.00
2.	Domestic	NIL **
3.	Grand Total in KL/Day	1820.00

* Domestic water supply from IWSS Lingaraj Area Talcher.

Name of Product	Water consumption per Unit of Product(Liter/ton)	
	2021-22	2022-23
Coal	46.51	38.85



(ii) RAW MATERIAL CONSUMPTION (Per ton of coal)

Name of Raw Material	Consumption of Raw Material (Per Ton of Coal Produced)	
	2021-22	2022-23
H.S. Diesel (Ltrs/ T)	2.06 (Dept. +Cont.)	2.08 (Dept. +Cont.)
Petrol(Ltrs/ T)	NIL	NIL
Lubricants(Ltrs/ T)	0.025(Dept. +Cont.)	0.024(Dept. +Cont.)
Electricity(kwh/T)	0.88	0.763
Explosives(Kg/T)	0.804	0.885

PART-C**POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT***(Parameters as specified in the consent issued)*

Pollutants	Quantity of Pollutants discharged mass/day (KL / day)	Concentration of Pollutants in discharges (mass/ volume)	% of Variation from Prescribed Standards with Reasons
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Water (Annual average)

		Mine sump	OGT Outlet	STP Outlet	Within Prescribed Standard
TSS(mg/l)	Not possible to Quantify	--	27.5	35.0	
BOD(mg/l)		--	--	<2	
COD(mg/l)		--	27.00	--	
pH		6.31	7.00	7.36	
O&G (mg/1)		--	<4.00	--	

AIR (Ambient Air Quality of one station- Annual average: Gutha Shahi A2)

			Within Prescribed Standard
SPM(ug/m3)	Not Possible to Quantify	137.75	
PM 10 (ug/m3)		64.41	
PM 2.5 (ug/m3)		23.00	
SO2(ug/m3)		13.04	
NOx (ug/m3)		17.54	

PART-D**HAZARDOUS WASTES**

As specified under Hazardous Waste Management & Handling Rules, 1989)

	Hazardous Waste	Total Quantity (Liter/Kg)	
		During the financial year 2021-22	During the current financial year 2022-23
(a)	From Process ;		
i	Burnt Oil recovered in Workshop	26595 Itrs	48621 Itrs
ii	Oil soaked filters in Nos.	390 Nos.	410 Nos.
(b)	From Pollution Control facility :		
i	Oil / Oil emulsion recovery from Oil & Grease Trap.	15 Itrs	12 Itrs
ii	Oily sludge from ETP	180 m ³	190 m ³
iii	Chemical Waste (if any)	NIL	NIL

PART – E
SOLID WASTES (Other than Hazardous)

	Particulars	Total Quantity of Solid Waste Generated (Mm ³).	
		2021-22	2022-23
a	From Process(Top Soil & OB)	26.721 Mm ³	33.122 Mm ³
b	From Pollution Control facilities (STP & Shed-Pond Sludge)	STP - 35 m ³	STP - 45 m ³
c	(I) Qnty. Recycled or Re-utilized (OB Back filled)	26.721 Mm ³	33.122 Mm ³
	(ii) Sold	NIL	NIL
	(iii) Disposed	NIL	NIL

PART-F

PLEASE SPECIFY THE CHARACTERISTICS (IN TERMS OF CONCENTRATION AND QUANTUN) OF HAZARDOUS AS WELL AS SOLID WASTE AND INDICATE THE DISPOSAL PRACTICE ADPOTED FOR BOTH THESE CATEGORIES OF WASTES.

(I) Hazardous Wastes:

Name of Hazardous Waste	Quantity generated in the year-2022-23	Disposal Practices
Burnt oil from work shop (Ltrs)	48621 Ltrs	Auction to authorized recyclers
Oil soaked filter from workshop	410 Nos.	Disposed in Impervious Pit
Oil & Grease from ETP/OTG (Ltrs)	12 Ltrs	Auction to authorized recyclers
Oily Sludge from ETP/OTG (m ³)	190 m ³	Disposed in Impervious Pit
Oil emulsion	NIL	-
Chemical Waste, if any	NIL	-
Battery(Nos.)	25 Nos.	Auction to authorized recyclers

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

(II) Solid Wastes:

Solid Waste	Quantity generated In the year 2022-23	Disposal Practices
Top Soil (Mm3)	0.30 Mm ³	Spread over the backfilled area for reclamation
OB (Mm3)	32.822 Mm ³	Used to filled quarry voids.
Sludge from STP	45 m ³	Used as manure

D. J. Singh

Land Reclamation and OB disposal – Progressive till March- 2023

	Area (Ha.)	Volume / No. of Plants
(1) External OB Dump	10.80 Ha	1.96 Mm ³ /27000 Nos.
(2) Excavated land	573.91 Ha	222.936 Mm ³
(3) Land affected (1+2)	584.71Ha	-
(4) Backfilled (Out of 2)	286.10 Ha	220.976 Mm ³ +12.34 Mm ³ (From Bhubaneswari OCP) Total = 233.316 Mm ³
(5) Land Physically reclaimed(Out of 3)	144.50 Ha	
(6) Land Bio logically reclaimed(Out of 3)	105.60*Ha	315074Nos.

* Out of 105.60Ha Biological reclamation, 10.80 Ha is external OB dump reclamation.

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 detail 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.

TABLE-1.1
AIR POLLUTION CONTROL MEASURES

Sl.No	EMP PROVISIONS	Whether provided or not	Remarks
1.	Watering 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	
7.	Mechanized coal transportation system	Provided	

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TABLE-1.2**WATER POLLUTION CONTROL MEASURES**

Sl.N	EMP Provision	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	Total sump capacity= 38.10 Lakhs m³
2.	Run-off around reclamation area will be controlled by providing catch drains and sedimentation lagoon combination.	Provide	
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 discharged to natural watercourse.	Provided	
4.	Domestic wastewater will be treated in screens, oxidation pond/ aerated lagoon. Sanitary waste to be disposed off into septic tank & soak-away pit.	Provided	STP of 0.51 MLD Capacity provided
5.	Workshop effluent will be treated in Oil & Grease Trap & Sedimentation Tank.	Provided	ETP of 240 m³ capacity provided
6.	Zero discharge from Mine shall be maintained.	Maintained	
7.	Piezometer shall be installed for measurement of under- ground water depth and its quality.	Provided	PZ No.- MTP-05 Near Ananta canteen

TABLE-1.3**LAND RECLAMATION**

S.No.	EMP Provisions	whether provided or not	Remarks
01.	Top Soil Management :- Proper stripping, storage and Relocation of topsoil.	Provided	
02.	Technical Reclamation of O.B Dump :- Proper reshaping and regarding of top surface, providing drainage arrangement and top soil spreading for external and internal dumps.	Provided	
03.	Biological Reclamation :- Plantation of suitable yearly Species of herbs, shrubs & plants over technically Reclaimed dumps.	Provided	



IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of Environmental Management during 2022-23 was Rs.4.60 per ton of Coal.

PART-H

Additional measures / investment proposal (2023-24) for environmental protection including abatement of pollution, prevention of pollution.


HEADS	AMOUNT Rs. (approx. in lakhs
Dust suppression (Dept.)	225.60
Dust suppression (Contractual.)	86.98
Plantation	30.00
Environmental monitoring by CMPDIL	79.195
ETP and STP operation and maint. cost	113.00
Cleaning of roads and service buildings	10.27
Annual maintenance of coal transport road.	95.00
Hydrogeological report for NOC, CGWA	75.00
Environment & Ecology Study	30.00
Installation of Fog cannon	60.00
Installation of Wheel washing system	25.00
Installation of Instant shower system	30.00
Installation of vertical greenery	100.00
Installation of wind wavier	100.00
Construction of Poly house	20.00
Renovation of Medicinal garden	95.00
Grand total	1175.045

PART - I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF THE ENVIRONEMNT

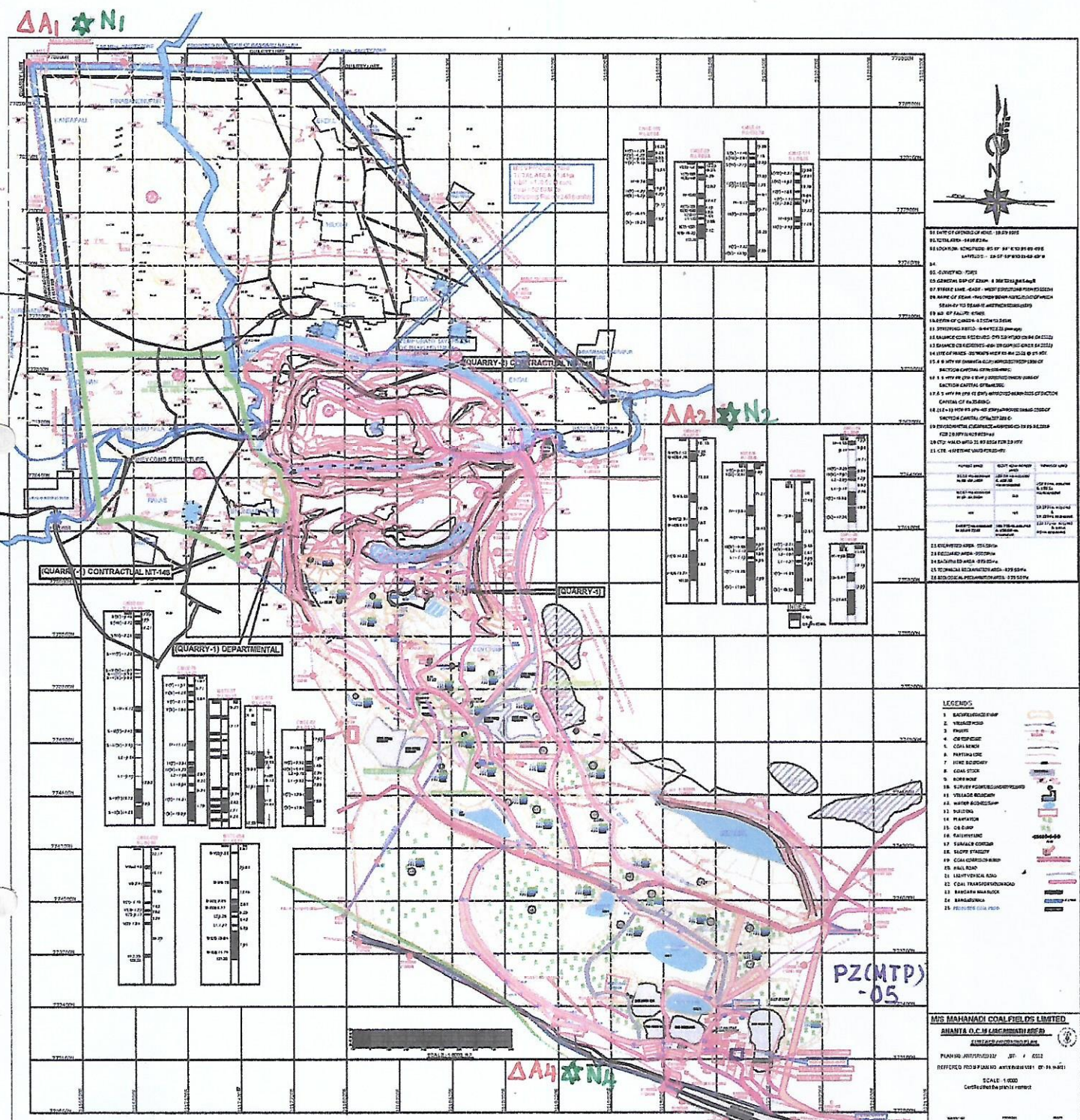
Note: Please attach a plan showing the relevant features like present working / quarry, External Dump, Back filling, Plantation, Sedimentation Pond / MDTP, O& G Trap, ETP, Workshop, CHP, STP etc and Environmental Monitoring Stations.


10/8/23
Envt .Officer,
Ananta OC Project


10/8/2023
Project Officer,
Ananta OC Project
Project Officer
Ananta Opencast Project
Jagannath Area, MCL

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AIR, NOISE & WATER MONITORING STATIONS

1. GUTHA SAHI VILLAGE
2. NORTH EAST OF MINE
3. CENTRAL NURSERY OPP. GM OFFICE (JA)
4. NEAR NBVL STATION JNC.
5. ANANTA VIHAR COLONY TAP WATER
6. DERA TUBE WELL WATER
7. PIEZO METER (MTP-05) NEAR AACP CANTEEN □PZ

ΔA1 ☆ N1
 ΔA2 ☆ N2
 ΔA3 ☆ N3
 ΔA4 ☆ N4

○ W1
 ○ W2

O W2 DERA
 ΔA3 ☆ N3
 CENTRAL NURSERY
 ○ W1
 SURVEYOR AACP
 ENVT. OFFICER ANANTA VII AACP
 PROJECT OFFICER AACP

Project Officer
Ananta Opencast Project
Jagannath Area, MCL