

FORM – V

JAGANNATH COLLIERY, MCL

ENVIRONMENTAL STATEMENT

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

Part – A

1. Name and address of the Owner/Occupier of the industry operation or process : Sri Sarat Kumar Rath
(Name of the Project Officer/Sub-Area Manager & Office address to be given) : Office of the Project Officer
: Jagannath Colliery
PO: Balanda
: Talcher, Dist: Angul, 759116
2. Industry category : Primary (Coal Mining Operation)
3. Production Capacity : 7.5MTY
(Coal production during the year 2021-22) : **7.032 Mil Te**
4. Year of establishment : 1971
5. Date of 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 & OB produced.

II. WATER CONSUMPTION (KL/DAY)

Sl. No.	Industrial/Mining	Consumption in Cu-m/Day
a.	Haul road dust suppression	1030.00
b.	Dust suppression at CHP	650.00
c.	Dust suppression at siding	NIL
d.	Fire fighting	100.00
e.	Workshop	300.00
f.	Others(Green belt, recharge etc)	200.00
g.	Domestic (Own use)	101.00
h.	Total in KL/Day	2381.00

Name of the product	Water consumption per unit of product in Liter.	
	2020-2021	2021-2022
Coal	152.10	123.58

(III) Raw Material Consumption (per Te of coal):

SI No.	Name of raw material	Consumption of Raw material (per tonne of coal produced)	
		2020-2021	2021-2022
1.	HS diesel (l/t)	2.821	1.459
2.	Petrol (l/t)	-	-
3.	Lubricants (l/t)	0.024	0.010
4.	Electricity (Units/t)	5.423	4.851
5.	Explosives(kg/t)	0.460	0.468

PART – C**POLLUTION DISCHARGED TO ENVIRONMENT/UNIT OF OUTPUT****(Parameters 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	35.33	30	40.42	Within permissible limits.
BOD(mg/l)		-	-	<2.0	
COD(mg/l)		27.8	28	-	
pH		7.23	7.40	7.42	
O&G(mg/l)		<4.00	<4.00	-	
Air (Ambient air quality of one station – annual average) Near MDTP					
SPM($\mu\text{g}/\text{m}^3$)	Not possible to quantify	252.86			Within permissible limits.
PM2.5($\mu\text{g}/\text{m}^3$)		54.77			
PM10($\mu\text{g}/\text{m}^3$)		157			
SO ₂ ($\mu\text{g}/\text{m}^3$)		16.44			

PART – D**HAZARDOUS WASTES****(As specified under hazardous Waste Management & Handling Rules,1989)**

Hazardous Waste	Total quantity (kg)	
	During the current financial year (2020-21)	During the current financial year (2021-22)
a). From Process:	24,000 ltrs.	20,800 ltrs.
i) Burnt Oil recovered in workshop		
ii) oil soaked filters	557 nos.	447 nos.
b). From pollution control facilities :-		
i)Oil recovery from Oil & Grease Trap	(i) 08 ltrs. (oil)	(i) 15 ltrs. (oil)
ii) oily sludge	(ii) 2.5 m ³ (oily sludge)	(ii) 07 m ³ (oily sludge)
iii) chemical waste(if any)	iii) Nil	iii) Nil

PART – E
Solid Wastes (Other than Hazardous)- ok

Particulars	Total Quantity	
	During the current Financial Year (2020-21)	During the current Financial Year (2021-22)
a) From Process(Top soil and over burden)	5.503 Mil m ³	7.181 Mil m ³
b) From pollution control facilities(STP & MDTP sludge)	25.00 m ³	26.0 m ³
c) 1. Qty. Recycled or reutilized within the unit	5.503 Mil m ³	7.181 Mil m ³
2. Sold	-	-
3. Disposed	25.00 m ³ used as manure	26.0 m ³ used as manure

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.

(II) Hazardous Wastes:

Name of Hazardous Wastes	Qty. generated during the year 2021-22	Disposal practices
Burnt oil etc.(Liter), (from W/Shop)	20,800 ltrs.	By auction to authorized parties.
Oil soaked filters(nos) From workshop	447 nos.	Stored in an impervious lined pit under covered shed.
Oil & Grease (kg) (from ETP / OGT)	15 ltrs.	Stored in drums over concrete floor under covered shed
Oily sludge (M ³) (from ETP / OGT)	07 m ³	Stored in an impervious lined pit under covered shed.
Oil emulsion	nil	-----
Chemical waste if any(kg)	nil	-----
Battery (nos)	24 nos.	By auction to authorized parties.

(II) Solid Wastes:

Solid waste	Quantity generated in the year 2021-22	Disposal practices
Top soil (m ³)	14,500 m ³	Spread over technically reclaimed area for plantation
OB (m ³)	71,66,278 m ³	Back filled.
STP & Sed-Pond Sludge	26.0 m ³	Used as manure.

Land Reclamation & OB disposal : Progressive till March-2022

	Area (ha)	OB Volume/ No. of Plants
1) External OB dump	36.47	5.514 Mil m ³
2) Excavated Land	379.18	105.388 Mil m ³
3) Land affected (1+2)	415.65	-
4) Backfilled (out of 2)	311.86	99.874 Mil m ³
5) Land physically reclaimed (out of 3)	212.13	-
6) Land biologically reclaimed (out of 3)	174.62	405375 nos

* Bio logically reclaimed Area of 174.62Ha is inclusive of 36.47 Ha of external OB 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 CMPDI. 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.	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	

Table – 1.2
WATER POLLUTION CONTROL MEASURES

Sl. No.	EMP Provisions	Whether provided or not	Remarks
1.	Mine water is to be collected in central sump on dip side of Pit. This will not act as sedimentation lagoon.	Provided	3 nos. of worked out quarry are used for water storage.
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 discharged to natural water course.	Provided	
4.	Domestic wastewater will be treated in screens, oxidation pond/aerated lagoon. Sanitary waste to be disposed off into septic tank & soak pit.	Provided	1.0 MLD capacity. Of STP/DETP is installed at Jagannath colony.
5.	Workshop effluent will be treated in oil and grease trap & sedimentation tank.	Provided	Integrated ETP is provided
6.	Zero discharge from Mine shall be maintained	Maintained	
7.	Piezometers shall be installed for measurement of underground water depth & its quality	provided	MTP-04 : inside central nursery, beside golf hut.

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: Proper reshaping and regarding of top surface, Providing drainage arrangement and top soil spreading for external and internal dumps.	Provided	
3.	Biological Reclamation: Plantation of suitable species of herbs shrubs & indigenous tress over technically reclaimed dumps	Provided	

IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION

Cost of environment management during 2021-22 was Rs. 4.33 per tonne of coal.

PART - H

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

Sl. No.	HEAD	Amount Rs. In Lakhs (approx)
01.	Plantation & Misc,	51.00
02.	Dust Suppression	200.00
03.	Environmental Monitoring & statutory fees	60.00
04.	Operation and maintenance of ETP, STP & OGT	25.00
05.	Cleaning & maintenance of Coal Transport Road	170.00
06.	Operation and maintenance of Wheel washing system	15.00
07.	Operation and maintenance of Fog canon	50.00
08.	Installation of CAQMMS	80.00
	TOTAL	651.00

PART - I

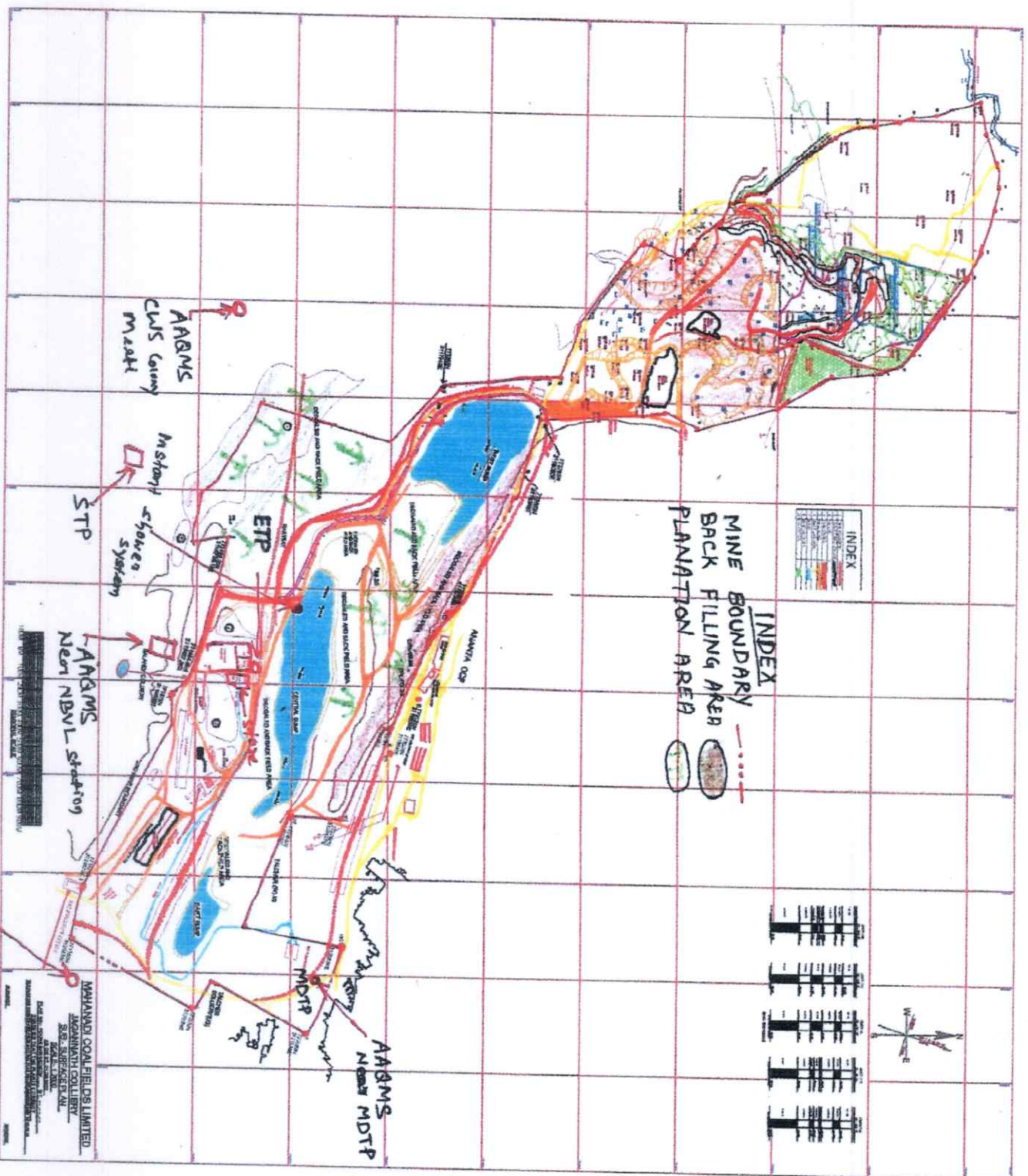
Any other particulars for improving the quality of the environment

1. World Environment Day was celebrated to spread awareness among the employees and nearby villagers on pollution, its mitigation and conservation and to encourage the persons for taking up tree plantation and its protection.
2. Van Mahotsava was celebrated with plantation of 50 nos. of fruit bearing Plants and 200 nos. saplings distributed to employees & nearby villagers to increasing awareness.

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)

परियोजना अधिकारी
अंगरक्षक औसीपी
Project Officer
11-2022-23



25/9/2012
 Env. Oberster, INC

Dy. Manager (Supply)
 SPS
 INC

AABMS
 Central Nursery