

Letter No: OCPL/ 527

Date: 30-09-2024

Odisha Coal and Power Limited

(A Government of Odisha Company)

CIN : U10100OR20155GC018623

Website : www.ocpl.org.in

To
The Member Secretary,
State Pollution Control Board (SPCB), Odisha
Paribesh Bhawan, A/118, Nilakantha Nagar,
Unit-VIII, Bhubaneswar-751012

Sub: Submission of Annual Environmental Statement in Form –V for the year 2023-2024 of Odisha Coal and Power Ltd.

Ref: (i) Environmental Clearance Ref. No. 7669/SEIAA (SEIAA File No. 111991/05-MIS/07-2019) dated 13.12.2019
(ii) Consent to Operate issued SPCB, Odisha vide letter dt. 12.03.2024 (refer Annexure 1)

Sir,

In reference to the letter cited above, OCPL would like to submit that the construction of "OCPL Mines Colony – Manoharpur Township Project" located at village Sarbahal, Tahasil Hemgir, District Sundargarh has been completed and Consent to Operate (CTO) for the said colony has also been obtained from SPCB Odisha vide letter dated 19.03.2024 (Refer Annexure 1).

As per the condition no. 14 (Part B; General Condition) stipulated in EC letter, we are hereby submitting the annual Environmental Statement in Form –V for the financial year 2023-2024 for Manoharpur Township Project of Odisha Coal and Power Ltd.

This is for your kind perusal.

Thanking you.
Yours faithfully,



Agent

Manoharpur Township Project

Encl: As above.

Copy to: i. The Joint Director (s), Regional Office, Eastern Region, Ministry of Environment & Forest and Climate Change (MoEF&CC), A-3, Chandrasekharapur, Bhubaneswar, Odisha.
ii. The Regional Officer, State Pollution Control Board, Jharsuguda, Odisha.

FORM – V
(See rule 14)

Environmental Statement for the Financial year ending the **31st March 2024**

PART – A

1.	Name & address of the owner/ occupier of the industry, operation or process.	M/s Odisha Coal and Power Limited OCPL Mines Colony - Manoharpur Township Project (24.28 Acres), Village Sarbahal, Tahasil Hemgir, Dist. Sundargarh, Odisha
2.	Industry category Primary (STC Code), Secondary (STC Code)	Building Construction Project
3.	Production Capacity- Units	The proposed project is a residential housing project. Total residential unit = 116 nos. with other amenities such as guest house, school, indoor sport complex, dispensary etc.
4.	Year of establishment/Operation	15.07.2023
5.	Date of last environmental statement	26.09.2023

The **Consent to Operate (CTO)** for the said project has been issued by Odisha State Pollution Control Board (HSPCB) vide letter No. 3871/IND-I-CON-6829 dated 19.03.2024 valid up to 31/03/2026. The copy of same is enclosed as **Annexure 1**.

PART – B

1.	Water Consumption m ³ /day process	
	Cooling /Domestic/ Horticulture	286 KLD (Fresh water from reservoir in CHP 196 KLD + Treated water from STP 90 KLD)
	Others (Road maintenance/ Arboriculture)	-
	Total	286 KLD

Name of Products	Water consumption per unit of products	
	During the Previous financial year (2022-23)	During the current financial year (2023-24)
OCPL Mine Colony (Manoharpur Township)	NIL	286 KLD

As this is a residential housing project, hence there is no production. However, there is water consumption in areas mentioned above:

2.	Raw Material Consumption	Consumption of Raw Material Per unit of output	
	Name of Raw Materials	Name of	During the previous During the

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	Products	financial year	current financial year
It is a residential housing project; therefore there is no raw material/ chemical used. However housekeeping items, furniture and eatable items are being used by the residents.			
PART – C			
Pollution Generated (Parameters as specified in the consent issued) – The monitoring tests have been carried out by MoEF&CC / OSPCB accredited Laboratory M/s Centre for Envotech and Management Pvt. Ltd.			
	Pollutants	Quantity of pollution generated	Percentage of variation from prescribed standards with reasons
a. Water		STP- 70 KLD	
Parameters	Result	Standard	Variation
pH	6.6	6.5-9.0	Within standard limit
Total Suspended Solid (mg/l)	18	<20	Within standard limit
Chemical Oxygen Demand (mg/l)	20	<50	Within standard limit
Biochemical Oxygen Demand (mg/l) – 3 days @ 27°C	9	<10	Within standard limit
Oil & Grease	<1	10 max	Within standard limit
		STP – 50 KLD	
pH	7.7	6.5-9.0	Within standard limit
Total Suspended Solid (mg/l)	19	<20	Within standard limit
Chemical Oxygen Demand (mg/l)	22	<50	Within standard limit
Biochemical Oxygen Demand (mg/l) – 3 days @ 27°C	8	<10	Within standard limit
Oil & Grease	<1	10 max	Within standard limit
The monitoring report for 70 and 50 KLD STP is also enclosed separately as Annexure II.			
b. Air Emission			
3 nos. of acoustically treated DG sets (1 x 200 kVA and 2 x 63 kVA each) with adequate stack height as per CPCB/SPCB norms have been installed to disperse the emissions and also			

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DG sets installed at site are EPA compliant and being used only in case of power failure. Further, green belt development is also being carried out within the township premises to control the emission generated from pollution sources such as Traffic Movement etc.

The Ambient air quality monitoring has been carried out to check the resultant value of air quality parameters such as PM10, PM2.5, Sox, NOx through an MoEF&CC/OSPCB accredited agency i.e. M/s Visiontek Environment Consultancy Services Pvt. Ltd. The monitoring report shows that all the parameters are well within the limits as prescribed under NAAQMS, 2009. The copy of air quality monitoring report is attached as **Annexure III**.

PART – D

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

Hazardous Wastes		Total Quantity (in Kg)	
		During the previous financial year (2022-23)	During the current financial year (2023-24)
a. From Process		-	-
i.	Used Oil from DG Set	Nil	The generated quantity of used oil from DG sets was very less and the same has been taken by the maintenance service vender.
ii.	E-Waste	The generated E- waste has been stored at an earmarked place within the township premises.	
b.	From Pollution Control Facilities	N.A.	Nil

**PART – E
Solid Wastes**

Solid Wastes		Total Quantity	
		During the previous financial year (2022-23)	During the current financial year (2023-24)
a. From Process			
i.	Municipal Solid Waste	Nil	Maximum 108 kg / day of solid waste including domestic Garbage is

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			generated per day
b. From Pollution Control Facilities			
i.	STP Sludge	Nil	40 Kg
c. Quantity recycled or re-utilized within the unit.			
i.	Quantity recycled or re-utilized	N.A.	-
ii.	Sold	N.A.	-
iii.	Disposed	-	Disposed in green area as the nature of dry sludge of STP is organic manure.

PART – F

Please specify the characteristics (in terms of concentration and quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

S. No	Category	Quantity	Disposal method
Solid Waste			
1.	Municipal Solid Waste	Approx. 108 kg of Garbage is generated per day	Biodegradable waste through Organic Waste Converter (OWC) and non-biodegradable through vender
TOTAL			
Hazardous Waste			
1.	Used Oil	2023-24s	The generated quantity was very less and has been taken by the maintenance service vender. To the maintenance vender
TOTAL		-	

PART – G

Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.

1.	STP – By installing Sewage Treatment Plant of 70 KLD & 50 KLD based on Moving Bed Biological Reactor (MBBR) Technology. Treated water is being reused within the residential complex for Horticulture, and Road & Floor Washing purpose.
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2.	Energy efficient equipment's like CFL and LED lights have been installed to conserve energy
3.	Green Area – Well maintained green area is developed at inside of the premises to reduce noise pollution, air pollution and also increasing the scenic beauty.
4.	Air Pollution Control System- D.G Sets are equipped with acoustic chamber & stacks of adequate height to reduce the noise and control the stack emission to abate air pollution. Further, the DG sets are EPA compliant and used only in case of power failure.

PART – H

Additional investment proposal for environmental protection including abatement of pollution.

1. **STP** – Reduce the fresh water requirement
2. **Acoustic Chamber** – Reduce the noise level and vibration
3. **Dual Plumbing** – Reuse the treated waste water for Horticulture, Road & Floor Washing Purpose
4. **Organic Waste Treatment Facility** – Organic waste Converter has been installed at site to treat the bio degradable waste.

The Environment (Protection) Rules, 1986

PART – I

Miscellaneous

Any other particulates in respect of environment protection and abatement of pollution

- 1) **Green Area** – Reduce Noise level, Reduce air pollution, and increase scenic Beauty.
- 2) Pressure regulating devices provided at site to maintain optimal pressure to prevent water loss.

List of Annexure

S. No	Annexure No	Document Description
1.	Annexure I	Copy of Valid Consent to Operate issued from OSPCB
2.	Annexure II	Monitoring Report STP Analysis Results
3.	Annexure III	Report showing Ambient Air Quality Monitoring Results

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STATE POLLUTION CONTROL BOARD, ODISHA

[DEPARTMENT OF FOREST, ENVIRONMENT & CLIMATE CHANGE, GOVERNMENT OF ODISHA]

A/118, Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012

Phone-2561909, Fax: 2562822, 2560955 E-mail: paribesh1@ospboard.org, Website: www.ospboard.org

CONSENT ORDER

No. 3871 / IND-I-CON- 6829 Dt. 19/03/2024 /

CONSENT ORDER NO.3008

Sub : Consent for discharge of sewage and trade effluent under Section 25/26 of Water (PCP) Act, 1974 for operation of the township.

Ref : Your online application ID No.5330728, Dtd.19.01.2024.

Consent to operate is hereby granted under section 25/26 of Water (Prevention & Control of Pollution) Act, 1974 and rules framed thereunder to

Name of the Industry M/s OCPL Mines (Manoharpur Township)

Name of the Occupier & Designation: Sri Lella Ramachandra Reddy, Mine Agent

Address: Vill: Sarbahal, Tahasil: Hemgir, Sundargarh, Odisha-770013

Details of Township:

Sl. No.	Description	Details
1.	OCPL Mines Colony (Monahrpur Township) with total area of 24.28 Acres.	Built-up area of 37,622 m ²

This consent order is valid for the period from 01.04.2024 to 31.03.2026.

This consent order is valid for the specified outlets, discharge quantity and quality of effluents (ii) quantity of emission and its quality, specified chimney / stack (iii) quantity of solid waste and its disposal as specified below.

This consent is granted subject to the General and Special Conditions stipulated below:

A. Discharge permitted through the following outlet subject to the standard:

Outlet No.	Description of outlet	Point of discharge	Quantity of discharge KLD	Prescribed Standard			
				pH	TSS (mg/L)	BOD (mg/L)	Fecal Coliform (MPN/100 ml)
1.	Outlet of two STPs (STP-I of 50 KLD & STP-II of 70 KLD) for domestic wastewater treatment	To be used for gardening, toilet flushing and other miscellaneous	NIL	6.5 to 9.0	<100	<30	<1000

B. Emission permitted through the following stack subject to the prescribed standard:

Chimney Stack No.	Description of Stack (Stack attached to)	Stack height (m)	Quantity of emission	Prescribed Standard		
				PM	SO ₂	NO _x
1.	Dg Sets of 2 X 63 KVA and 1 X 200 KVA	As per the CTE condition No.29	-	-	-	-

C. Disposal of solid waste permitted in the following manner:

Sl. No.	Type of Solid waste	Quantity generated	Quantity to be reused on site	Quantity to be reused off site	Quantity disposed off	Description of disposal site.
1.	Garbage including glass and plastic	--	--	--	--	Handed over to Municipality
2.	STP Sludge	--	--	--	--	Used as manure in gardening

D. GENERAL CONDITIONS FOR ALL UNITS:

1. The consent is given by the Board in consideration of the particulars given in the application. Any change or alternation or deviation made in actual practice from the particulars furnished in the application will also be the ground liable for review/variation/revocation of the consent order under section 27 of the Act of Water (Prevention & Control of Pollution) Act, 1974 and section 21 of Air (Prevention & Control of Pollution) Act, 1981 and to make such variations as deemed fit for the purpose of the Acts.
2. The housing project would immediately submit revised application for consent to operate to this Board in the event of any change in the approved layout plan, building facility / quantity /quality of the wastewater generated / capacity or number of DG set etc. and the applicant shall not change or alter as such without the permission of the Board.
3. The application shall comply with and carry out the directives/orders issued by the Board in this consent order and at all subsequent times without any negligence on his part. In case of non-compliance of any order/directives issued at any time and/or violation of the terms and conditions of this consent order, the applicant shall be liable for legal action as per the provisions of the Law/Act.
4. The issuance of this consent does not convey any property right in either real or personal property or any exclusive privileges nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Central, State laws or regulation.
5. This consent does not authorize or approve the construction of any physical structure or facilities or the undertaking of any work in any natural water course.
6. The applicant shall display this consent granted to him in a prominent place for perusal of the public and inspecting officers of this Board.
7. An inspection book shall be opened and made available to Board's Officers during the visit to the project site.
8. The applicant shall furnish to the visiting officer of the Board any information regarding the construction, installation or operation of effluent treatment system / air pollution control system / stack monitoring system any other particulars as may be pertinent to preventing and controlling pollution of Water / Air.
9. Meters must be affixed at the entrance of the water supply connection so that such meters are easily accessible for inspection and maintenance and for other purposes of the Act provided that the place where it is affixed shall in no case be at a point before which water has been tapped by the consumer for utilization for any purposes whatsoever.
10. The applicant shall display suitable caution board at the place where the effluent is entering into any water-body or any other place to be indicated by the Board, indicating therein that the area into which the effluents are being discharged is not fit for the domestic use/bathing.
11. Storm water shall not be allowed to mix with the trade and/or domestic effluent on the upstream of the terminal manholes where the flow measuring devices will be installed.
12. The applicant shall maintain good house-keeping within the complex. All pipes, valves, sewers and drains shall be leak-proof. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas.
13. The applicant shall at all times maintain in good working condition and operate as efficiently as possible all the treatment or control facilities installed by him to achieve with the term(s) and conditions of the consent.
14. Care should be taken to keep the anaerobic lagoons, if any, biologically active and not

utilized as mere stagnation ponds. The anaerobic lagoons should be fed with the required nutrients for effective digestion. Lagoons should be constructed with sides and bottom made impervious.

15. The effluent disposal on land, if any, should be done without creating any nuisance to the surroundings or inundation of the lands at any time.
16. If at any time the disposal of treated effluent on land becomes incomplete or unsatisfactory or create any problem or becomes a matter of dispute, the project must adopt alternate satisfactory treatment and disposal measures.
17. The sludge from treatment units shall be dried in sludge drying beds and the drained liquid shall be properly treated.
18. The applicant shall provide port holes for sampling the emissions and access platform for carrying out stack sampling and provide electrical outlet points and other arrangements for chimneys/stacks and other sources of emissions so as to collect samples of emission by the Board or the applicant at any time in accordance with the provision of the Act or Rules made therein.
19. The applicant shall provide all facilities and render required assistance to the Board staff for collection of samples / stack monitoring / inspection.
20. No control equipments or chimney shall be altered or replaced or as the case may be erected or re-erected except with the previous approval of the Board.
21. The stack monitoring system employed by the applicant shall be opened for inspection to this Board at any time.
22. There shall not be any fugitive or episodal discharge from the premises.
23. Any upset condition in any of the plant/plants of the project which is likely to result in increased effluent discharge/emission of air pollutants and / or result in violation of the standards mentioned above shall be reported to the Headquarters and Regional Office of the Board by fax / speed post within 24 hours of its occurrence.
24. The project proponent shall plant trees within the complex, develop green belt along the boundary and develop landscaping and greenery within the premises.
25. The solid waste such as sweeping, wastage packaging, empty containers residues, sludge from wastewater treatment system shall be collected and disposed off scientifically to the satisfaction of the Board, so as not to cause fugitive emission / dust problems / leaching etc.
26. Notwithstanding anything contained in this conditional letter of consent, the Board hereby reserves to it the right and power under section 27(2) of the Water (Prevention & Control of Pollution) Act, 1974 to review / impose additional condition / revoke / change / alter any and/or all the conditions imposed herein and to make such variations as deemed fit for the purpose of the Act by the Board.
27. The industry shall abide by E(P) Act, 1986 and Rules framed there-under.

E. SPECIAL CONDITIONS:

1. The proponent shall comply the conditions as stipulated in environmental clearance issued by SEIAA, Odisha vide letter No.7669 / SEIAA, dtd.13.12.2019.
2. The entire domestic wastewater shall be treated in the Sewage Treatment Plant (STP) of capacity 50 KLD and 70 KLD. The treated wastewater shall be reused for toilet flushing, landscaping and green belt to the maximum extent. The balance treated effluent shall be discharged to vacant land inside the township area and

shall meet prescribed standard mentioned in Section-A of this order. STP shall be operated all the time and maintained properly.

3. Regular monitoring of effluents shall be carried out and report shall be sent to the Board on quarterly basis.
4. The revised standard prescribed by the Hon'ble NGT in their order dated. 30-04-2019 in the matter of O.A No.1069/2018 of Principal Bench will be applicable subject to issuance of notification by the MoEF & CC Govt. of India.
5. Separate storm water, drain and weep holes in the compound walls shall be provided to ensure natural drainage of rainwater in the catchment area during the monsoon period.
6. Rainwater harvesting structure shall be developed inside the premises and maximum efforts shall be made to reuse harvested rainwater with a definite plan and programme to reduce drawl of fresh water.
7. Diesel power generating sets shall have acoustic enclosure.
8. The height of the stack connected to DG set shall conform to the following
 - i) $H = h + 0.2\sqrt{KVA}$
 - ii) h = Height of the building where it is installed in meter
 - iii) KVA = Capacity of DG set
 - iv) H = Height of the stack in meter above ground level.
9. There shall not any leakage of oil from DG set area. Lube oil from Diesel generator shall be disposed to authorized waste oil recycler.
10. The entire underground sewerage system shall be properly maintained so that there shall be no spillage or overflow from manholes and not mixed with storm water.
11. The proponent shall segregate organic waste from the MSW and segregated organic waste shall be converted to manure through organic waste converter. The proponent shall store the organic waste in closed shed before use the same in organic waste converter. Open burning of any type of solid waste shall be avoided.
12. Energy Conservation measure like installation of CFLs/TFLs for the lighting the areas outside the building shall be in place. Used CFLs and TFLs shall be properly collected and disposed off /sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.
13. The proponent shall install solar powered lighting and heating system wherever possible.
14. The unit shall provide provision of sludge holding tank in the STP for collection of sludge and the dried sludge shall be disposed off without causing public nuisance. The sludge shall be utilized for manure.
15. The proponent shall comply with the provision under Plastic Waste Management Rules, 2016 and amendment made thereafter and shall ensure prohibition on use of Single Use Plastic within the premises.

16. All the plastic waste generated from the premises shall be collected and sent for co-processing to the nearby cement kilns and / or registered recyclers under Plastic waste management Rules, 2016.
17. The proponent shall ban the use of Single Use Plastic within the premises of the township as per the notification of MoEF & CC, Govt. of India vide No.GSR-571(E), dtd.12.08.2021.
18. The proponent shall take immediate action towards installations of **Online Continuous Effluent Monitoring Systems (OCEMS)** in the STPs of the township and connect the OCEMS data with the server of SPCB, Odisha / CPCB.
19. A green belt of adequate width and density preferably with local species along the periphery of the project area shall be raised so as to provide protection against particulates and noise. It must be ensured that at least 20% of the total land area shall be under permanent green cover. The proponent shall ensure the maintenance of green belt throughout the year and for all time to come.
20. The Board may impose further condition or modify the conditions are stipulated in this order during installation and/or at the time of obtaining consent to operate and may revoke this order in case the stipulated conditions are not implemented and / or information is found to have been suppressed / wrongly furnished in the application form.
21. In case the consent fee is revised upwards during this period of consent, the unit shall pay the differential amount to the Board (for the remaining years) to keep the consent order in force. If the industry fails to pay the amount within the period stipulated by the Board the consent order will be revoked without prior notice.
22. The Board reserves the right to revoke / refuse consent at any time during this period in case any violation is observed and modify / stipulate additional conditions as deemed appropriate.

To

**Sri Lella Ramachandra Reddy, Mine Agent,
M/s. OCPL Mines Colony (Monoharpur Township),
At- Sarbahal, Tahasil: Hemgir,
Dist:Sundargarh, Odisha-770013**



[Signature]
19/03/2024
CHIEF ENV. SCIENTIST

STATE POLLUTION CONTROL BOARD, ODISHA

Memo No. 3872 /Dt. 19/03/2024

Copy forwarded to:

- i) The Collector & District Magistrate, Sundargarh
- ii) The Regional Officer, SPC Board, Jharsuguda
- iii) The DFO, Sundargarh
- iv) The CES, Central laboratory, SPC Board, Bhubaneswar
- v) Consent Register

[Signature]
19/03/2024
CHIEF ENV. SCIENTIST

STATE POLLUTION CONTROL BOARD, ODISHA

**GENERAL STANDARDS FOR DISCHARGE OF
ENVIRONMENT POLLUTANT'S PART – A: EFFLUENTS**

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal Areas
		(a)	(b)	(c)	(d)
1.	Colour & odour	Colourless/ Odourless as far as partible	--	See 6 of Annex-1	See 6 of Annex-1
2.	Suspended Solids (mg/l)	100	600	200	a. For process wastewater – 100 b. For cooling water effluent 10% above total suspended matter of influent.
3.	Particular size of SS	Shall pass 850	--	--	--
4.	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5.	Temperature	Shall not exceed 5 ⁰ C above the receiving water temperature	--	--	Shall not exceed 5 ⁰ C above the receiving water temperature
6.	Oil & Grease mg/l max.	10	20	10	20
7.	Total residual chlorine	1.0	--	--	1.0
8.	Ammonical nitrogen (as N) mg/l max.	50	50	--	50
9.	Total Kajeldahl nitrogen (as NH ₃) mg/l max.	100	--	--	100
10.	Free ammonia (as NH ₃) mg/l max.	5.0	--	--	5.0
11.	Biochemical Oxygen Demand (5 days at (20 ⁰ C) mg/l max.	30	350	100	100

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Coastal Areas
		(a)	(b)	(c)	(d)
12.	Chemical Oxygen Demand, mg/l max.	250	--	--	250
13.	Arsenic (as As) mg/l max.	0.2	0.2	0.2	0.2
14.	Mercury (as Hg) mg/l max.	0.01	0.01	--	0.001
15.	Lead (as pb) mg/l max.	01.	1.0	--	2.0
16.	Cardmium (as Cd) mg/l max.	2.0	1.0	--	2.0
17.	Hexavalent Chromium (as Cr + 6) mg/l max.	0.1	2.0	--	1.0
18.	Total Chromium (as Cr) mg/l max.	2.0	2.0	--	2.0
19.	Copper (as Cu) mg/l max.	3.0	3.0	--	3.0
20.	Zinc (as Zn) mg/l max.	5.0	15	--	15
21.	Selenium (as Sc) mg/l max.	0.05	0.05	--	0.05
22.	Nickel (as Nil) mg/l max.	3.0	3.0	--	5.0
23.	Cyanide (as CN) mg/l max.	0.2	2.0	0.2	0.02
24.	Fluoride (as F) mg/l max.	2.0	15	--	15
25.	Dissolved Phosphates (as P) mg/l max.	5.0	--	--	--
26.	Sulphide (as S) mg/l max.	2.0	--	--	5.0
27.	Phennolic compounds as (C ₆ H ₅ OH) mg/l max.	1.0	5.0	--	5.0
28.	Radioactive materials	10 ⁷	10 ⁷	10 ⁸	10 ⁷

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Coastal Areas
		(a)	(b)	(c)	(d)
	a. Alpha emitter micro curie/ml. b. Beta emitter micro curie/ml.	10 ⁶	10 ⁶	10 ⁷	10 ⁶
29.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
30.	Manganese (as Mn)	2 mg/l	2 mg/l	--	2 mg/l
31.	Iron (Fe)	3 mg/l	3 mg/l	--	3 mg/l
32.	Vanadium (as V)	0.2 mg/l	0.2 mg/l	--	0.2 mg/l
33.	Nitrate Nitrogen	10 mg/l	--	--	20 mg/l

NATIONAL AMBIENT AIR QUALITY STANDARDS

Sl. No	Pollutants	Time Weighed Average	Concentrate of Ambient Air		
			Industrial Residential, Rural and other Area	Ecologically Sensitive Area (notified by Central Government)	Methods of Measurement
(1)	(2)	(3)	(4)	(5)	(6)
1.	Sulphur Dioxide (SO ₂), µg/m ³	Annual * 24 Hours **	50 80	20 80	-Improved west and Gaeke - Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO ₂), µg/m ³	Annual * 24 Hours **	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3.	Particulate Matter (size less than 10µm) or PM ₁₀ µg/m ³	Annual * 24 Hours **	60 100	60 100	-Gravimetric - TOEM - Beta Attenuation

4.	Particulate Matter (size less than 2.5µm) or PM _{2.5} µg/m ³	Annual * 24 Hours **	40 60	40 60	-Gravimetric - TOEM - Beta Attenuation
5.	Ozone (O ₃) µg/m ³	8 Hours ** 1 Hours **	100 180	100 180	- UV Photometric - Chemiluminescence - Chemical Method
6.	Lead (Pb) µg/m ³	Annual * 24 Hours **	0.50 1.0	0.50 1.0	-AAS/ICP method after sampling on EMP 2000 or equivalent filter paper. - ED-XRF using Teflon filter
7.	Carbon Monoxide (CO) mg/m ³	8 Hours ** 1 Hours **	02 04	02 04	- Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH ₃) µg/m ³	Annual* 24 Hours**	100 400	100 400	-Chemiluminescence - Indophenol Blue Method
9.	Benzene (C ₆ H ₆) µg/m ³	Annual *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, mg/m ³	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), mg/m ³	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), mg/m ³	Annual*	20	20	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper

* Annual arithmetic mean of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals.

** 24 hourly or 08 hourly or 01 hourly monitored values, should be complied with 98% of the time in a year, 2% of the time may exceed the limits but not on two consecutive days of monitoring.

Validity unknown
Digitally Signed by: MITRA
SEN MAJHI

Date: 2024.05.19 16:25:32 IST





CENTRE FOR ENVOTECH AND MANAGEMENT CONSULTANCY PVT. LTD.

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Report no- CEMC/OCPL/300324/W2

Issued Date- 30.03.2024

WASTE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s OCPL, Township, Sarbabal
 Date of Sampling : 24.03.2024
 Sampling by : Client's Representative
 Date of Sample Received : 25.03.2024
 Sample Quantity : 1.0 Ltr
 Sample Description : Waste Water
 Sample Location : 50 KLD STP Treated Water (02)
 Date of Analysis : 25.03.2024 to 30.03.2024
 Reference No : CEMC-03032024W2

ANALYSIS RESULT

SL NO	Parameter	Units	Discharge Standard As Per OSPCB	Testing Method	Result
1	pH Value @ 25 C	-	6.5 - 9.0	APHA 4500H+B	7.7
2	Total Suspended Solids	Mg/l	<20	APHA 2540 D	19
3	B.O.D for 3 days @ 27 C	Mg/l	<10	APHA 5210 B	8
4	C.O.D	Mg/l	<50	APHA 5220 C	22
5	Oil & Grease	Mg/l	-	APHA 5520 B	<1

End of Report

Authorized Signatory



Notes:

- The result given above related to the tested sample, as received. The customer asked for the above test only.
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Environmental Studies (EIA & EMP), Monitoring, Forest Diversion Planning, DPR, Wildlife Management Plan, Hazardous & Safety Studies, RS& GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey
 Regd. Office: 1st Floor, N-5/305, IRC village, Nayapalli, Bhubaneswar-751015, Odisha, India
 E-mail- ccmc_consultancy@yahoo.co.in, ccmc122@gmail.com, website: www.ccmc.in

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Handwritten signature: m/civil

Handwritten signature
 Dy. Manager (Civil)
 Coal and Power Ltd.



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Report no- CEMC/OCPL/300324/W1

Issued Date- 30.03.2024

WASTE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s OCPL, Township, Sarbahal
 Date of Sampling : 24.03.2024
 Sampling by : Client's Representative
 Date of Sample Received : 25.03.2024
 Sample Quantity : 1.0 Ltr
 Sample Description : Waste Water
 Sample Location : 70 KLD STP Treated Water (01)
 Date of Analysis : 25.03.2024 to 30.03.2024
 Reference No : CEMC-30032024W1

ANALYSIS RESULT

SL NO	Parameter	Units	Discharge Standard As Per OSPCB	Testing Method	Result
1	pH Value @ 25 C	-	6.5 - 9.0	APHA 4500H+B	6.6
2	Total Suspended Solids	Mg/l	<20	APHA 2540 D	18
3	B.O.D for 3 days @ 27 C	Mg/l	<10	APHA 5210 B	9
4	C.O.D	Mg/l	<50	APHA 5220 C	20
5	Oil & Grease	Mg/l	--	APHA 5520 B	<1

End of Report

Authorized Signatory

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 Regd. Office: 1st Floor, N-5/105, IRC village, Nayapalli, Bhubaneswar-751015, Odisha, India
 E-mail- ccmc_consultancy@yahoo.co.in, ccmc122@gmail.com, website: www.ccmc.in



Reference

By:
 Manager (Civil)
 National and Power Ltd.



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Report no- CEMC/OCPL/300324/W2R

Issued Date- 30.03.2024

WASTE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s OCPL, Township, Sarbahal
 Date of Sampling : 24.03.2024
 Sampling by : Client's Representative
 Date of Sample Received : 25.03.2024
 Sample Quantity : 1.0 Ltr
 Sample Description : Waste Water
 Sample Location : 50 KLD STP Raw Water (02 R)
 Date of Analysis : 25.03.2024 to 30.03.2024
 Reference No : CEMC-30032024W2R

ANALYSIS RESULT

SL NO	Parameter	Units	Discharge Standard As Per OSPCB	Testing Method	Result
1	pH Value @ 25 C	-	6.5 - 9.0	APHA 4500H+B	8.0
2	Total Suspended Solids	Mg/l	<20	APHA 2540 D	150
3	B.O.D for 3 days @ 27 C	Mg/l	<10	APHA 5210 B	310
4	C.O.D	Mg/l	<50	APHA 5220 C	530
5	Oil & Grease	Mg/l	--	APHA 5520 B	<10

End of Report

Authorized Signatory

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 E-mail- ccmc_consultancy@yahoo.co.in, ccmc123@gmail.com, website: www.ccmc.in



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Handwritten signature
 Dy. Manager (Civil)
 M. S. and Power Ltd.



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MoEF&CC, Govt. of India, Recognised Environment Laboratory under Environment (Protection) Act, 1986.

Report no- CEMC/OCPL/300324/W1R

Issued Date- 30.03.2024

WASTE WATER QUALITY TEST REPORT

Name & Address of the Client : M/s OCPL, Township, Sarbahal
Date of Sampling : 24.03.2024
Sampling by : Client's Representative
Date of Sample Received : 25.03.2024
Sample Quantity : 1.0 Ltr
Sample Description : Waste Water
Sample Location : 70 KLD STP Raw Water (01 R)
Date of Analysis : 25.03.2024 to 30.03.2024
Reference No : CEMC-30032024W1R

ANALYSIS RESULT

SL NO	Parameter	Units	Discharge Standard As Per OSPCB	Testing Method	Result
1	pH Value @ 25 C	-	6.5 - 9.0	APHA 4500H+B	8.3
2	Total Suspended Solids	Mg/l	<20	APHA 2540 D	170
3	B.O.D for 3 days @ 27 C	Mg/l	<10	APHA 5210 B	350
4	C.O.D	Mg/l	<50	APHA 5220 C	610
5	Oil & Grease	Mg/l	--	APHA 5520 B	<10

End of Report

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GIS, Baseline Survey, Hydrological & Geological Studies, Socio-economic Studies, DGPS & ETS Survey.
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E-mail- ccmc_consultancy@yahoo.co.in, ccmc122@gmail.com, website: www.ccmc.in



Signature

Signature
Manager (Civil)
Oil and Power Ltd.



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

Certified for : ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Accredited by : NABET-A Grade, MOEF & CC/CPCB & SPCB-A Grade

• Infrastructure Engineering
• Water Resource Management
• Environmental & Social Study

• Surface & Sub-Surface Investigation
• Quality Control & Project Management
• Renewable Energy

• Agricultural Development
• Information Technology
• Public Health Engineering

• Mine Planning & Design
• Mineral/Sub-Soil Exploration
• Waste Management Services

Laboratory Services
Environment Lab
Food Lab
Material Lab
Soil Lab
Mineral Lab
&
Microbiology Lab

Ref: Envlab/23-24/TR-13826

Date: 06.02.2024

AAQ MONITORING REPORT FOR JANUARY-2024 (BUFFER ZONE)

1. Name of Project : Manoharpur Open Cast Coal Mine Project (8 MTPA)
2. Name of Customer : Odisha Coal and Power Limited (OCPL), Sundargarh
3. Monitoring Instruments : RDS (APM 460 BL), FPS (APM 550)
4. Sampling Location : AAQMS-3: Sarbahal Village OCPL Mines Colony
5. Location Co-ordinates : 21° 58' 4.7388" N, 83° 48' 35.91187" E
6. Sample collected by : VCSPL representative

Date of Monitoring	Sampling duration	Suspended Particulate Matter, SPM ($\mu\text{g}/\text{m}^3$)	Respirable Particulate Matter, PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM2.5 ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)	CO (mg/m ³)
11.01.2024	24 hrs.	76.2	56.8	30.8	14.6	21.6	0.48
26.01.2024	24 hrs.	74.5	55.2	29.2	15.2	20.8	0.45
AVERAGE		75.4	56.0	30.0	14.9	21.2	0.47
NAAQ Standard		--	100.0	60.0	80.0	80.0	4.0 (1hour)
Testing Method		Gravimetric IS 5182: (Part 4) RA 2019	Gravimetric IS 5182: (Part 23) RA 2017	IS 5182 (Part 24) 2019	Improved West & Geake Method IS 5182 (Part-2) RA2017	Modified Jacob & Hochheiser Method IS 5182 (Part-6) RA2017	NDIR Spectroscopy method IS 5182 (Part-10) RA 2019

BDL Values: SO₂ < 4 $\mu\text{g}/\text{m}^3$, NO_x < 9 $\mu\text{g}/\text{m}^3$

