

Letter No. OCPL/281  
Date: 28-05-2024



To,

The Member Secretary,  
State Environment Impact Assessment Authority (SEIAA), Odisha  
Qr. No. 5RF-2/1, Unit-IX,  
Bhubaneswar – 751022

**Odisha Coal and Power Limited**

(A Government of Odisha Company)

CIN : U10100OR20155GC018623

Website : www.ocpl.org.in

**Sub:** Submission of Half Yearly Compliance Report of the Environmental Clearance conditions of "OCPL Mines Colony – Manoharpur Township Project in a plot area of 98256.92 Sq.mt over an area of 24.28 acres with built-up area of 37622 Sq.mt" at Sarbahal Village, Tehsil Hemgiri, District Sundargarh of Odisha Coal & Power Limited.

**Ref:** (i) EC letter Ref. No. 7669/SEIAA (SEIAA File No. 111991/05-MIS/07-2019) dated 13.12.2019 (Refer Appendix I)

Dear Sir,

In reference to the notification issued by MoEF&CC vide letter S.O. 5845 (E) dated 26.11.2018 and Environmental Clearance as referred above in respect of "OCPL Mines Colony – Manoharpur Township Project" of Odisha Coal and Power Limited located at Sarbahal Village, Tehsil Hemgiri, Dist. Sundargarh, Odisha. Please find enclosed herewith Half Yearly Compliance Report in soft copy (by email) and hard copy of same is being couriered to your good office for the period of October 2023 to March 2024.

This is for your kind information and needful action at your end.

Yours Faithfully

**Head of Mines**  
Manoharpur Coal Mine Project

Copy to:

1. The Joint Director(s), Regional Office, Eastern Region, Ministry of Environment, Forest & Climate Change, A-3, Chandrasekharpur, Bhubaneswar-751023 (soft copy of compliance report sent through email in reference to MoEF&CC-ERO letter dt. 11.05.2020; File No. 106-12/EPE)
2. The Scientist ('E' & Regional Directorate), Central Pollution Control Board, South end Conclave, Block 502, 5<sup>th</sup> & 6<sup>th</sup> Floors, 1582 Razidanga Main Road, Kolkata-700107.
3. The Member Secretary, State Pollution Control Board, Odisha, Paribesh Bhawan, A/118, Nilkanthnagar, Unit VIII, Bhubaneswar 751012.

**Regd. Office; Zone-A, Ground Floor, Fortune Tower, Chandrasekharpur, Bhubaneswar - 751023**

**Phone;+91 674 2300654/664, Fax : +91 674 2300657**

**Site Office : At/Po.: Hemgir, Dist - Sundargarh - 770013, Odisha**

# **HALF YEARLY COMPLIANCE REPORT**

**For**

## **Environmental Conditions**

**October 2023 - March 2024**

**OCPL MINES COLONY - MANOHARPUR TOWNSHIP PROJECT**



**Odisha Coal & Power Limited,  
Zone-A, Ground Floor,  
Fortune Tower, Bhubaneswar-751023, Odisha  
Web: [www.ocpl.org.in](http://www.ocpl.org.in)**

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# POST ENVIRONMENTAL CLEARANCE (EC) COMPLIANCE REPORT

## OCPL Mines Colony – Manoharpur Township Project

EC Letter Ref. No. 7669/SEIAA (SEIAA File No: 111991/05-MIS/07-2019) Dated 13.12.2019

Sr. No.	EC Letter Condition	Compliance
<b>PART A - SPECIFIC CONDITIONS</b>		
1.	Consent to Establish / Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Consent to Establish (CTE) has been obtained. The construction of residential building structure along with infrastructure facilities such as road, storm water network, electrical network, landscaping etc. have been completed. The partial portion of township (i.e. residential) has also been occupied by the employees of OCPL during the FY 2023-24 and the same is in operation phase. Further, Consent to Operate (CTO) has also been obtained from State Pollution Control Board, Odisha vide letter dt. 19.03.2024 as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974. The copy of same is attached as <b>Annexure 1</b> .
2.	The approval of the competent authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc. as per National Building Code including protection measures from lightening etc.	The said colony has been developed as per local building bye laws or applicable norms. Further, completion certificate will be obtained from the competent authority prior to occupancy.
3.	The project proponent shall obtain all necessary clearance / permission from all relevant agencies including town planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.	Agreed. An approval in this regards has been obtained from Block Development Officer (BDO), Hemgir. Development has been carried out as per the layout approved by BDO, Hemgir.
4.	The project proponent shall ensure that the guidelines for building and construction projects issued vide this Ministry's OM No. 19-2/2013-IA.III dated 9 <sup>th</sup> June, 2015 are	Complied.

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	followed to ensure sustainable environmental management.	
5.	The proponent shall ensure natural environmental amenities of the area preserved in the township. Elephant proof barrier shall be provided.	Agreed. OCPL would like to submit that the Site Specific Wildlife Conservation Plan for Manoharpur Coal Mine Project (MCMP) has been approved by Principal Chief Conservator of Forests (PCCF-WL) & Chief Wildlife Warden (CWW), Odisha which will be implemented by the State Forest Dept.

#### Topography and Natural Drainage

6.	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape and other Sustainable Urban Drainage System (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water. Building shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.	Due care has been taken during the cutting and filling operations to minimize the flow of natural water. Also, scientifically designed storm water drainage network has been provided so that natural drainage of the project area will not get obstruct. The rain water harvesting pits has been constructed to recharge the storm water which will increase the ground water table of the surrounding area.
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#### Water Requirement, Conservation, Rain Water Harvesting, and Ground Water Recharge

7.	As proposed, fresh water requirement from Hirakud Reservoir shall not exceed 129 KLD.	Noted.
8.	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.	Approval for withdrawal of water from Hirakud Reservoir has been obtained from Dept. of Water Resources, Govt. of Odisha.  No ground water and nearby surface water is being utilized for the said project. Hence, there will be no impact on other users in surrounding.
9.	The quantity of fresh water usage, water recycling and rain water harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, MoEF&CC and SEIAA,	Separate metering of water will not be carried out as water will be drawl from storage tank located at CHP site (MCMP) to mine colony for usage. Further, the supply of water is being carried out from Hirakud Reservoir to Clarified

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	Odisha along with six monthly monitoring reports.	<p>Water Storage Tank (CWST) located at Ib Thermal Power Station (ITPS), Banarpali and from there to CHP site. Hence, flow measurement or metering of water will be carried out only at inlet point (i.e. CWST).</p> <p>STP treated waste water is being reused for horticulture or green belt development purpose within the project premises.</p> <p>Further, rain water harvesting is also being carried out by providing the recharge pits to increase the water table of surrounding area.</p>
10.	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.	<p>Dual plumbing pipelines for domestic fresh water and generated waste water have been provided within the project premises. Also, the treated recycled waste water obtained from STP of 70 KLD is being reused for landscaping purpose inside the mine colony.</p> <p>The another STP of 50 KLD has also been provided for infrastructure area such as school, sports complex, facility management building, guest house etc. and treated waste water obtained is being reutilized in landscaping / horticulture development.</p>
11.	Use of water saving devices / fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.	Water conservation measures such low flow fixtures etc. have been adopted to the possible extent to save the water.
12.	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.	Kindly refer point no. 10 as mentioned above.
13.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Complied during construction phase.
14.	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provisions for storage and recharge should be followed	Adequate nos. of rain water harvesting pits have been provided in confirmation to local building bye laws.

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	as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits of adequate nos. shall be provided.	
15.	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering. The proponent shall also obtain permission from Water Resources Department, Govt. of Odisha for drawal of water.	Not applicable as no ground water dewatering is proposed in the said project.  OCPL has obtained the permission for withdrawal of surface water from Hirakud Reservoir from Department of Water Resource (DoWR), Govt. of Odisha vide letter dt. 27.07.2021.
16.	A complete plan for rainwater harvesting at the proposed site shall be drawn up and implemented before operation phase in letter and spirit to recharge ground water in the area. The complete rainwater harvesting plan after implementation shall be submitted to SEIAA.	Kindly refer the Point no. 14 as mentioned above.

#### **Solid Waste Management**

17.	The provisions of the Solid Waste (Management) Rules, 2016, E-Waste (Management) Rules 2016, and the Plastic Waste (Management) Rules 2016 shall be followed.	Will be complied with as per applicable norms.  Organic waste Converter has been provided at site to treat the generated organic domestic waste and the same will be reused as manure in horticulture development.  Currently, the generated domestic waste is very less in quantity, therefore it is being handed over to maintenance vender for further safe disposal.
18.	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Noted and complied during construction phase.
19.	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials. Wet garbage shall be composted in	Noted and will be complied as per applicable norms.  OCPL has distributed 2 nos. of dustbins to each household (i.e. Green and Blue) to

	Organic Waste Converter. Adequate area shall be provided for solid waste management within the premises which will include area for segregation, composting. The inert waste from group housing project will be sent to dumping site.	segregate the domestic waste as wet and dry waste for further safe disposal purpose.
20.	The proponent shall mandatorily install Organic Waste Converter for solid waste management within the premises before start of operation phase.	Organic Waste Converter for solid waste management has been installed within the premises to treat the generated waste. However, the same will be commissioned after generation of sufficient domestic waste.
21.	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	Agreed.
22.	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the Municipal Solid Waste generated from project shall be obtained.	Noted.
<b>Sewage Treatment Plant &amp; Maintenance</b>		
23.	Sewage shall be treated in 2 nos. of STP of capacities 50 KLD and 70 KLD respectively. The treated effluent from STP shall be recycled/re-used for flushing, gardening and DG cooling. STP's of two nos. of 50 KLD and 70 KLD capacity shall be installed before start of the operation phase of the building.	Agreed and complied. 2 nos. of STP having capacity of 50 KLD and 70 KLD have been installed and commissioned at colony. Consent to Operate (CTO) for the same has also been obtained as per details mentioned above in condition no. 1.
24.	Approval from the competent authority shall be obtained for discharging treated effluent / untreated effluents into the public sewer / disposal / drainage systems along with the final disposal point.	Not applicable as the project proponent will not discharge any treated/untreated effluent outside the project premises.
25.	No sewage or untreated effluent water would be discharged through storm water drains.	Agreed and Noted.
26.	The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the SEIAA, Odisha before the project is commissioned for	The installation & commissioning of the Sewage Treatment Plant (STP – 70 KLD & 50 KLD) has been carried out by an independent certified expert.

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	operation. Periodical monitoring of water quality of treated sewage shall be conducted and report shall be submitted to SPCB. Necessary measures should be made to mitigate the odour problem from STP.	
27.	Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) manual on Sewerage and Sewage Treatment systems, 2013.	Sludge to be generated from onsite sewage treatment plant will not be hazardous in nature and can be used as organic manure in the landscaping / horticulture development within the project premises.
<b>Energy Conservation</b>		
28.	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the states which have notified their own ECBC, shall comply with the state ECBC. Outdoor and common area lighting shall be LED. Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window and roof u-values shall be as per ECBC specifications.	Trade off approach have been used to comply this condition. LED has been provided for lighting of outdoor and common areas.
29.	Energy conservation measures like installation of CFLs/LED for the lighting the area outside the building.	Noted and complied.
30.	Solar, wind or other renewable energy shall be mandatorily installed to meet electricity generation equivalent to 5% of the demand load or as per the state level / local building bye-laws requirement, whichever is higher. Follow super ECBC requirement of ECBC 2017 and provide compliance report.	Solar panel of 25 Kwp will be provided within the site to meet the electricity generation equivalent to 5% of total power demand of the said project. Appointment of agency for the said work is under process. Moreover, 10 nos. solar light of 45 watts each have been installed inside the township to harness and utilize the solar energy.
31.	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for	Kindly refer the Point no. 30 as mentioned above.



	<p>solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the requirement of the local building bye-laws requirement, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters as far as possible.</p>	
32.	<p>Use of environment friendly materials in bricks, blocks and other construction materials, shall be required for at least 20% of the construction material quantity. These include fly ash bricks, hollow bricks, AACs, Fly ash lime gypsum blocks, compressed earth blocks and other environment friendly materials. Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August 2003 and 25<sup>th</sup> January 2016. Ready mixed concrete must be used in building construction.</p>	<p>Environment friendly material i.e. fly ash bricks, RMC etc. have been used as building material in the construction of the said project.</p>
33.	<p>A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project shall be submitted.</p>	<p>Noted. Permission for power supply from TPWODL has been obtained vide letter dt. 15.01.2021. The copy of same has already been submitted to your good office vide our letter no. OCPL/480 dt. 28.05.2022 (refer Annexure 2).</p>
<p><b>Air Quality and Noise Quality Monitoring &amp; Preservation</b></p>		
34.	<p>Construction site shall be adequately barricaded before the construction begins. Dust, smoke, &amp; other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include screens for the building under construction, continuous dust / wind breaking walls around the site (at least 3 meter height). Plastic / tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murrum and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site. Sand, murrum,</p>	<p>Boundary wall has been constructed around the township to prevent the dust, smoke &amp; other air pollutants. The required building construction material during construction phase i.e. sand, cement etc. were stored at their appropriate places and covered properly with tarpaulin sheet, jute bags etc. to control the dust emissions.  Water sprinkling was also carried out to minimize the dust generation on unpaved surfaces i.e. roads etc.</p>

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	loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution. Wet jet shall be provided for grinding and stone cutting. Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.	
35.	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Rules, 2016. All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask.	The construction and demolition waste i.e. debris etc. which was very less in quantity have been used in backfilling of excavated areas or road development within the project premises.  The workers engaged at construction site were provided proper PPE's to ensure their good health.
36.	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding mandatory implementation of dust mitigation measures for construction and demolition activities for projects requiring environmental clearance shall be complied with.	Kindly refer the Point no. 34 as mentioned above.
37.	The gaseous emissions from DG sets shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.	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 provided to disperse the emissions.  The DG sets are being and will be used only in case of power failure.
38.	For indoor air quality the ventilation provisions as per National Building Code of India shall be provided.	Operable windows have been provided in compliance to applicable norms of NBC / local building bye laws.
39.	Ambient noise levels shall conform to residential standard both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level	Appropriate mitigation measures such as green belt development around the premises, acoustically treated DG sets, effective traffic management etc. have been provided as per the EMP to control the noise emissions.

	during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.	
<b>Green Cover</b>		
40.	Green-belt & avenue plantation of trees over the area of 31,529 m <sup>2</sup> (32% of total plot area) shall be done using native tree species / shrubs improving greenery & keeping in view aesthetics considerations in the whole complex. No tree cutting / transplantation of existing trees has been proposed in the instant project. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and / or invasive species should not be used for landscaping. The plantation of trees shall be completed in the construction phase.	Development of Green belt is being carried out as per the plan approved by BDO, Hemgir.  Peripheral planation comprises of native species has been carried out to develop the green belt around the township premises.
<b>Top Soil Preservation and Reuse</b>		
41.	Top soil should be stripped to a depth of 20 cm from the areas proposed for buildings, roads, paved areas and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.	Complied. The stripped top soil has been reutilized for landscaping purpose.
<b>Transport</b>		
42.	A comprehensive mobility plan, as per Ministry of Urban Development best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public and private networks. Road should be designed with due consideration for environment and safety of users. The road system can be designed with these basic criteria: <ul style="list-style-type: none"> <li>• Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.</li> <li>• Traffic calming measures</li> <li>• Proper design of entry and exit points</li> <li>• Parking norms as per local regulation</li> </ul>	Complied as per the applicable norms / local building bye laws.
43.	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the	Effective and scientifically designed traffic management plan will be followed within the proposed project premises.

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	roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project.	
44.	This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D. / competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	<p>The proposed development has been carried out in confirmation to local building bye laws and as per the plan approved by BDO.</p> <p>The development in surrounding area which may be developed by other agencies shall have their own responsibility to get the requisite permission from competent authorities before doing any development activity.</p>
45.	Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during non-peak hours.	PUC (Pollution under check) certified vehicles have been used at site during construction phase.
	Environment Management Plan	
46.	An Environmental Management Plan (EMP) shall be prepared and implemented to ensure compliance with the environmental conditions specified above. A dedicated Environment Monitoring Cell with defined functions and responsibility shall be put in place to implement the EMP. The environmental cell shall ensure that the environment infrastructure like Sewage Treatment Plant, Landscaping, Rain Water Harvesting, Energy Efficiency and conservation, water efficiency and conservation, solid waste management, renewable energy etc. are kept operational and meet the required standards. The environmental cell shall also keep the record of environment monitoring and those related to the environment infrastructure.	The EMP submitted to SEIAA, Odisha is being followed to implement the same at site. Also, an Environment Monitoring Cell (EMC) has been set up for Manoharpur Coal Mine Project who will ensure the effective implementation and monitoring of EMP at site.



47.	The project proponent shall implement environmental monitoring programme as per details submitted in EMP and submit monitoring reports to RO, MoEF&CC and SPCB on six monthly basis.	Will be complied during operation phase.
48.	All the conditions, liabilities and legal provisions contained in the Environmental Clearance shall be equally applicable to the successor management of the project in the event of the project proponent transferring the ownership, maintenance of management of the project to any other entity.	Agreed.
<b>Others</b>		
49.	Provisions shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Mostly local labors were hired for the development of proposed project. However, skilled/semi-skilled labor was hired from outside by the contractor for which basic amenities were provided i.e. temporary structure, toilet facility, drinking water facility etc. However, now the temporary structures have been removed after completion of the said project.
50.	A first aid room shall be provided in the project both during construction and operation of the project.	First aid box facility has been provided at site.
51.	The company shall draw up and implement Corporate Social Responsibility plan as per the Company's Act 2013.	CSR / peripheral development is being carried out w.r.t. Manoharpur Coal Mine Project and proposed colony has been constructed to facilitate the residential housing facility for the employee of OCPL.
52.	As per the MoEF&CC, Govt. of India Office Memorandum F.No.22-65/2017-IA.III dated 1 <sup>st</sup> May 2018, the project proponent is required to prepare and implement Corporate Environment Responsibility (CER) Plan. As per para 6(II) of the said O.M. appropriate funds shall be earmarked for the activities such as infrastructure creation for drinking water supply, sanitation, health, education, skill development, roads, cross drains, electrification including solar power, solid waste management facilities, scientific	Currently, Not Applicable as per the MoEF&CC guidelines .

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	<p>support and awareness to local farmers to increase yield of crop and fodder, rain water harvesting, soil moisture conservation works, avenue plantation, plantation in community areas etc. The activities proposed under CER shall be restricted to the affected area around the project. The entire activities proposed under the CER shall be treated as project and shall be monitored. The monitoring report shall be submitted to the regional office as a part of half yearly compliance report and to the District Collector. It should be posted on the website of the project proponent.</p>	
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**Part B - GENERAL CONDITIONS:**

1.	The project proponent shall comply with all the conditions stipulated in the building approval letter.	Agreed.
2.	The applicant (Project Proponent) will take necessary measures for prevention, control and mitigation of Air Pollution, Water Pollution, Noise Pollution and Land Pollution including solid waste management as mentioned by them in Form-1, Form-1A, and Environment Management Plan (EMP) in compliance with the prescribed statutory norms and standards.	EMP plan submitted to SEIAA, Odisha will be followed to prevent, control & mitigate the air pollution, water pollution, noise pollution etc.
3.	A copy of the Environmental Clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industries centre and Collector's Office / Tehsildar's office for 30 days.	Agreed.
4.	The project proponent has earmarked Rs 40.6 lakhs as capital cost & Rs. 12.2 lakhs as recurring cost towards environmental protection measures for the project. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the SEIAA, Odisha and MoEF&CC,	Will comply with. OCPL would like to submit that an approx. 61.35 lakhs rupees have been spent on installation & commissioning of 2 nos. STP having capacity of 50 KLD and 70 KLD towards the environmental protection measures to treat the generated waste water and reuse of treated water in horticulture / landscaping.

	Govt. of India and its concerned Regional Office, SPCB.	Apart from the above, green belt comprises of native plant species is being developed around the periphery of township which will act as a barrier and control dust pollution. An approx. 2.04 crores will be spent for the development of green belt and landscaping inside the township. The work of development of green belt is under progress.
5.	The applicant will submit half-yearly compliance report on post-environmental monitoring in respect of the stipulated terms and conditions in the Environmental Clearance to the State Environmental Impact Assessment Authority (SEIAA) Odisha, RO MoEF&CC BSR, SPCB, CPCB on 1 <sup>st</sup> June and 1 <sup>st</sup> December of each calendar year and upload the compliance report in the website of the Ministry.	Is being complied.
6.	Officials from the Regional Office of MoEF&CC, Bhubaneswar who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection.	Agreed.
7.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the SEIAA, Odisha.	Noted.
8.	The SEIAA Odisha reserve the right to add additional safeguards measures subsequently, if found necessary and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) act 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Agreed.
9.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosive, Fire Department, Civil Aviation Department, the Forest Conservation Act 1980 and the Wildlife	Necessary permission will be obtained, if applicable.

	(Protection) Act 1972 etc. shall be obtained as applicable by project proponents from the respective competent authorities.	
10.	These stipulations would be enforced among others under the provisions of the Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) 1981, the Environment (Protection) Act 1986, the Public Liability (insurance) Act 1991 and the EIA Notification 2006.	Agreed.
11.	The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the SEIAA, Odisha. The advertisement shall be made within seven days from the date of receipt of the clearance letter and a copy of the same shall be forwarded to the Regional Office of MoEF&CC, Bhubaneswar.	<p>Advertisement was published in two widely circulated newspapers in the region as per the following:</p> <ul style="list-style-type: none"> <li>(i) The Samaj (Odia Language)</li> <li>(ii) Business Standards, Bhubaneswar (English Language)</li> </ul> <p>The copy of advertisement published in above newspapers has already been submitted to the Regional Office of MoEF&amp;CC, Bhubaneswar vide letter no. OCPL/106 dated 04.02.2020.</p>
12.	A copy of the environmental clearance letter shall be sent by the proponent to concern Panchayat, ZilaParishad / Municipal Corporation, Urban local body and local NGO, if any, from whom suggestion/representation, if any were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	<p>The copy of Environmental Clearance (EC) granted for the said project has already been put on website of the company which can be seen at the following link:</p> <p><a href="http://www.ocpl.org.in/Environment.asp">http://www.ocpl.org.in/Environment.asp</a></p>
13.	The proponent shall submit/upload six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEF&CC, Govt. of India, the respective zonal office of CPCB and the SPCB. The criteria pollutant levels namely SPM, RSPM, SO <sub>2</sub> , NO <sub>x</sub> (ambient levels as well as stack emissions) or critical	<p>Agreed and is being complied.</p> <p>The criteria pollutant levels namely SPM, RSPM, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub> &amp; CO are being monitored regularly. The latest copy of same for the month of January 2024 is attached herewith as <b>Annexure 2</b> for your kind consideration please.</p>

	sectoral parameters indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
14.	The environmental statement for each financial year ending 31 <sup>st</sup> March in Form V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC, Govt. of India by E-mail.	Will be complied during operation phase of colony.
15.	Any appeal against this clearance shall lie with the National Green Tribunal, if preferred within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Agreed.



BY REGD. POST WITH AD



# 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@ospcboard.org](mailto:paribesh1@ospcboard.org), Website: [www.ospcboard.org](http://www.ospcboard.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 (Manoharpur Township) with total area of 24.28 Acres.	Built-up area of 37,622 m <sup>2</sup>

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 <sub>2</sub>	NO <sub>x</sub>
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 <sup>0</sup> C above the receiving water temperature	--	--	Shall not exceed 5 <sup>0</sup> 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 <sub>3</sub> ) mg/l max.	100	--	--	100
10.	Free ammonia (as NH <sub>3</sub> ) mg/l max.	5.0	--	--	5.0
11.	Biochemical Oxygen Demand (5 days at (20 <sup>0</sup> C) mg/l max.	30	350	100	100

Sl. No.	Parameters	Standards			
		Inland surface	Public sewers	Land for irrigation	Marine Costal 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 <sub>6</sub> H <sub>5</sub> OH) mg/l max.	1.0	5.0	--	5.0
28.	Radioactive materials	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>8</sup>	10 <sup>7</sup>



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 <sup>6</sup>	10 <sup>6</sup>	10 <sup>7</sup>	10 <sup>6</sup>
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 <sub>2</sub> ), µg/m <sup>3</sup>	Annual * 24 Hours **	50 80	20 80	-Improved west and Gaeke  - Ultraviolet fluorescence
2.	Nitrogen Dioxide (NO <sub>2</sub> ), µg/m <sup>3</sup>	Annual * 24 Hours **	40 80	30 80	- Modified Jacob & Hochheiser (Na-Arsenite) - Chemiluminescence
3.	Particulate Matter (size less than 10µm) or PM <sub>10</sub> µg/m <sup>3</sup>	Annual * 24 Hours **	60 100	60 100	-Gravimetric - TOEM - Beta Attenuation



4.	Particulate Matter (size less than 2.5µm) or PM <sub>2.5</sub> µg/m <sup>3</sup>	Annual * 24 Hours **	40 60	40 60	-Gravimetric - TOEM - Beta Attenuation
5.	Ozone (O <sub>3</sub> ) µg/m <sup>3</sup>	8 Hours ** 1 Hours **	100 180	100 180	- UV Photometric - Chemiluminescence - Chemical Method
6.	Lead (Pb) µg/m <sup>3</sup>	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 <sup>3</sup>	8 Hours ** 1 Hours **	02 04	02 04	- Non Dispersive Infra Red (NDIR) Spectroscopy
8.	Ammonia (NH <sub>3</sub> ) µg/m <sup>3</sup>	Annual* 24 Hours**	100 400	100 400	-Chemiluminescence - Indophenol Blue Method
9.	Benzene (C <sub>6</sub> H <sub>6</sub> ) µg/m <sup>3</sup>	Annul *	05	05	-Gas Chromatography based continuous analyzer - Adsorption and Desorption followed by GC analysis
10.	Benzo (a) Pyrene (BaP)-Particulate phase only, mg/m <sup>3</sup>	Annual*	01	01	-Solvent extraction followed by HPLC/GC analysis
11.	Arsenic (As), mg/m <sup>3</sup>	Annual*	06	06	-AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12.	Nickel (Ni), mg/m <sup>3</sup>	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, as applicable, shall be complied with 98% of the time in a year, 2% of the time, they may exceed the limits but not on two consecutive days of monitoring



# 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

## ANNEXURE - 2

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, $\text{PM}_{10}$ ( $\mu\text{g}/\text{m}^3$ )	PM2.5 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	CO (mg/m <sup>3</sup> )
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: SO<sub>2</sub> < 4  $\mu\text{g}/\text{m}^3$ , NO<sub>x</sub> < 9  $\mu\text{g}/\text{m}^3$



Reviewed by:



Approved by: