

ODISHA POWER GENERATION CORPORATION LTD.

(A Government Company of the State of Odisha)

CIN: U40104OR1984SGC001429

Ib Thermal Power Station

Banharpali, Dist.: Jharsuguda, Odisha – 768 234, India

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Letter No. ITPS/4981/WE

November 28, 2025

The Deputy Director General of Forest(C)

Ministry of Environment Forests & Climate Change

Eastern Regional Office

A/3, Chandrasekharpur

Bhubaneswar – 751023

Sub.: **Half yearly Environmental Status Report of Odisha Power Generation Corporation (2X660 MW ITPS), Banharpali, Dist. Jharsuguda for the period from April 2025- September 2025.**

Ref.: **ITPS Environmental Clearance No. No-J-13011/59/2008 for 2X660 MW Unit#3 & Unit#4 & Subsequent Amendments**

Dear Sir,

This has reference to the above subject and cited references.

Kindly find enclosed the half-yearly Environment Compliance report of Odisha Power Generation Corporation (2X660 MW ITPS) for the period from **April 2025- September 2025**.

We have also uploaded the half yearly compliance status for the mentioned period in OPGC **website- www.opgc.co.in**. *We have also mailed the same* for your ready reference and kind perusal.

Thanking you

Sincerely yours,

Anjana Ranjan Dash
Director (Operations)

Enclosures as above

- CC: i. Member Secretary, State Pollution Control Board, Odisha, Bhubaneswar – 751 012
ii. CPCB Regional Director Kolkata, Southend Conclave (5th Floor) 1582,Rajdanga Main Road Kolkata- 700107

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Cl. No.	EC Conditions	Compliance Status												
4. (i)	It shall be ensured that natural drainage in the area is not disturbed due to any activity associated with operation or development of the power plant.	The original natural drainage status has been maintained in the project area. The same will not be disturbed in future. In case diversion of any drainage is required in future, permission shall be taken from competent authority.												
4. (ii)	The height of the existing ash pond shall not be increased to accommodate fresh disposal of ash slurry.	<p>Since this condition pertains to EC of Unit#3 & Unit#4; hence it is implied that, "for fresh disposal of ash slurry from Unit#3 & Unit#4, height of the existing ash pond shall not be increased". The same is being fully complied. Ash from Units 3 & 4 has not been disposed in that time existing ash ponds i.e. (Ash Pond A & B). OPGC has constructed dedicated Ash Pond for its Unit#3 & Unit#4 at Tilia (Phase-1 & Phsase-2 Ash Ponds) which are operational.</p> <p>However, the heights of existing (Existing in the year 2010) ash dykes at Rengali are being raised for disposal of ash from Unit#1 & Unit#2.</p> <p>The levels of top of the height of ash ponds A, B and C are as follows</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="width: 20%;">Pond</th> <th style="width: 40%;">Level of Top of Dyke envisage in 2010</th> <th style="width: 40%;">Current Level of Top of Dyke in 2025</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>208 m RL</td> <td>210.5 m RL</td> </tr> <tr> <td>B</td> <td>208 m RL</td> <td>208 m RL Capped & reclaimed</td> </tr> <tr> <td>C</td> <td>Not in Existence</td> <td>211 m RL</td> </tr> </tbody> </table> <p>Further OPGC has taken CTE for all height raising</p> <p><u>In view of the above MoEF & CC may kindly consider this condition as being complied.</u></p>	Pond	Level of Top of Dyke envisage in 2010	Current Level of Top of Dyke in 2025	A	208 m RL	210.5 m RL	B	208 m RL	208 m RL Capped & reclaimed	C	Not in Existence	211 m RL
Pond	Level of Top of Dyke envisage in 2010	Current Level of Top of Dyke in 2025												
A	208 m RL	210.5 m RL												
B	208 m RL	208 m RL Capped & reclaimed												
C	Not in Existence	211 m RL												
4.(iii)	Wildlife conservation plan prepared in consultation with the office of the concerned Chief	<ul style="list-style-type: none"> The Site-Specific Wild Life Conservation Plan (SSWLCP) for the power plant has been prepared and got approved from Chief Wildlife Warden, Odisha on dt. 12th June 2014. 												

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	<p>Wildlife Warden shall be implemented before any expansion activity is undertaken. The status of implementation shall be submitted to the Regional Office of the Ministry within six months and from time to time.</p>	<ul style="list-style-type: none"> • The payment of amount Rs 6, 62, 92,000 for execution of SSWLCP was made on 18.07.2014 to Odisha CAMPA account. This payment was communicated to Forest Dept; Odisha vide our letter no 2161/WE on Dtd 19.07.2014. • Besides the above, OPGC has already spend Rs. 2.01 Crore towards plantation activities against the plantation requirement mentioned in approved wild life management plan. In the FY 2025-26, OPGC has completed plantation activities through OFDC by adopting Miyawaki Plantation technology on 5 acres of land near Tilia village. Under biodiversity conservation plan, OPGC has installed bird nests inside its campus for protection and conservation of avifauna.
<p>4. (iv)</p>	<p>Hydro-geological study of the area shall be reviewed annually, and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.</p>	<ul style="list-style-type: none"> • First hydrogeological study was carried out in the year 2014-15. In the study, no such adverse impact was observed. The report was submitted to the Ministry & OSPCCB. Thereafter yearly review study has been conducted with no observance of adverse impact so far. • A comprehensive detailed Hydrogeological study covering the plant and ash pond area was carried out during 2023-24. No adverse impact was observed from the study. The report is enclosed as Annexure-1. • 16 nos. of Bore wells have been constructed in the identified locations covering all directions of the plant and ash pond for collection of water samples & piezometric analysis.
<p>4. (v)</p>	<p>A twin flue stack of 275 m height shall be provided with continuous online monitoring equipment's for SO_x, NO_x and RSPM (PM_{2.5} & PM₁₀). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.</p>	<ul style="list-style-type: none"> • A twin flue stacks of 275 meters height have been constructed with sampling port hole and safe access arrangement for carrying out manual monitoring • 2 Nos of CEMS have been installed at the twin flue stack for monitoring of SO₂, NO_x and PM parameters and real time data being transferred to SPCB & CPCB. • Exit velocity of flue gas has been maintained more than 22 m/sec (In the range of 22m/s to 25m/s) · • Mercury emission and other emission parameters (PM, SO₂ & NO_x) of flue gas is being monitored periodically from January 2020 onwards through NABL accredited Lab and reports are being submitted. Mercury emission of the stack is also being monitored on monthly basis through NABL accredited lab and the results are enclosed as Annexure-2.

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4. (vi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High efficiency ESPs are designed and installed to ensure PM emission less than 50 mg/Nm ³ . Third party NABL monitoring results are enclosed as Annexure-2
4. (vii)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	<ul style="list-style-type: none"> • Dust extraction systems (Bag Filters) have been provided at Crusher House, Boiler Bunkers, Transfer Towers and vents of Ash Silos to control the fugitive dust emission. • Dust Suppression Systems (DSS- Dry Fog and Water sprinkling) have been installed at Track hopper, Transfer towers. • Rain Gun type water sprinkling systems have been installed at Coal stock yard to control fugitive emission during stacking. <p>Work Zone monitoring report in support of the functioning of the Dust Suppression/Extraction System has been enclosed as Annexure-2</p>
4. (viii)	Utilisation of 100% Ash generated shall be made from 4th year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	<p>As per Fly Ash Notification of December 2021, OPGC has the timeline of complying with 100% ash utilization requirement by 31.03.2027.</p> <ul style="list-style-type: none"> i. OPGCL has entered into an agreement with Dalmia cement, Rajgangpur and Ambuja cement, PAN India for supply of 1MMT fly ash per year to each cement plants (the transportation is being done through dedicated BTAP rakes). ii. OPGC has served notice to MCL and OCPL referring fly ash notification 31 December 2021 for OB mix, concurrent filling and back filling of mines with coal ash. iii. OPGC is in process of procurement of BTAP type wagons and construction of dry ash silos at OCPL (2 silos of 1500MT capacity each) end. This will help OPGC to avoid road transportation of ash particularly narrow village roads. After pneumatic unloading of ash into the silos at mines end, the ash will be used for back filling/OB mix or it can also be used in nearby extinct quarries, low lying areas and road projects. It is pertinent here to mention that majority of the extinct stone quarries and low-lying areas are in Sundergarh district, which are in close proximity to OCPL.

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	<p>iv. OPGC has discovered rate contract price for different slabs up to lead distance of 300KM (aerial distance) & above. This will help OPGC in utilization of ash at distant avenues.</p> <p>v. For enhancing ash utilization from the older units i.e. Unit#1 & Unit#2, OPGC is in process of making major changes in Ash Handling system of Unit#1 & Unit#2.</p> <p>vi. OPGC at present has an avenue for supplying of 80LMT of ash to different NHAI, SH, PWD road projects & work has already been initiated for transportation of 12.3 Lakh MT of ash in the 1st Phase.</p> <p>vii. Recently Birjupali Stone Quarry has been allotted to OPGC & OPGC has already applied for temporary lease as per provisions mentioned in SOP dated 07.07.2025 for disposal of ash in extinct stone quarry.</p> <p>Due to the following reasons OPGC has not been able to achieve 100% ash utilization:</p> <p>i. As the plant is situated at a remote location (pit head power plant located in rural area) with inadequate road infrastructure, the transportation of ash through narrow village road having low load bearing capacity is a very difficult task.</p> <p>ii. There is a limited scope of ash utilization in brick manufacturing. Moreover, utilization in this particular area cannot exceed more than 2% to 3%.</p> <p>iii. This is to be mentioned here that Big Govt. stone quarry or low lands are not available in the locality. OSPCB, SOP dated 07.07.2025 for reclamation of Stone quarries has not provided any scope of ash utilization in private stone quarries. We would like to mention here that there are many stone quarries in and around ITPS over private land having Gharwari/Agriculture kism. However, the referred SOP does not allow reclamation of such quarries.</p> <p>iv. This is to be mentioned here that obtaining lease for ash filling in stone quarries is a time taking process.</p> <p>v. The village narrow roads are having low weight bearing capacity, which restrict the plying of multi axil carriers.</p>
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	<p>vi. Considering OPGC plant's location (Pit Head), mine void back filling of ash is the only means of utilization by which OPGC can achieve 100% ash utilization. The steps taken, so far, are as follows.</p> <ul style="list-style-type: none">➤ There was a progress on mine void allotment in the year 2006. With the support from Regional Office, MoEF and SPCB, MCL had consented to allot Lilari mine void to OPGC. Subsequently, in July 2007, MCL accorded consent for taking up EIA & Feasibility Study for back filling in the void based on which OPGC engaged CIMFR to conduct the studies in October 2007. During the course of the EIA study, the consent given to OPGC was withdrawn by MCL unilaterally vide their letter No MCL-3185/13.02.2008 stating "the life of Lilari Mine is extended with ten more years". Thereafter, OPGC has been pursuing MCL time and again involving regulatory as well as Govt. to reconsider the withdrawal or consider allotting any other mine void near to OPGC site but there has been no progress.➤ State Pollution Control Board, Odisha made a proceeding on 05.06.10 for backfilling of OPGC ash in BOCM Mine void of MCL as an alternative solution against allotment of Lilari Mine void, but no initiative has been taken, so far, from MCL side➤ MCL has also been directed repeatedly by OPGC Chairman & Principal Secretary, Energy, Govt. of Odisha, but no positive response has, so far, been received from MCL.➤ In a meeting held on 24.01.2011 with Principal secretary Energy, Govt. of Odisha, CMD, MCL has given consent to give in principle approval for back filling BOCM mind void, but the same has not been done, so far.➤ In response to the letter of Director (Operation), OPGC, dtd.24.08.2013 on the subject, Director (Tech. P&P), MCL negated the request on the ground of BOCM expansion towards dip slide and no scope to back fill ash in running mine even though OPGC proposed for the construction of a partition bund to separate the void space from active mine for ash back filling.➤ In a high-level meeting held on 13.12.2013 under the Chairmanship of Chief Secretary, GoO, directions for allotment of BOCM mine void to OPGCL were issued to MCL on 03.04.2014 by Dept. of Environment & Forest, GoO. The said directions were for taking
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		<p>expeditious steps on this front. However, there has not been any progress, as yet</p> <ul style="list-style-type: none"> ➤ In a letter dated 10.08.2020 OPGC had again requested Director Technical, MCL for allotment of BOCM mine void, however the request was turned down stating various technical reasons. ➤ In a letter dated 14.06.2021 OPGC had again requested Director Technical for allotment of BOCM mine void, however the request was turned down vide MCL letter No253H, dated 07.08.2021 stating the reason of excavation of bottom seam and integration of Lakhanpur, Belpahar & Lilari mines. However, OPGC is still working on high priority to pursue with MCL, involving Government & other agency to get newly allotted nearest mine void to fulfill this important regulatory obligation.
4. (ix)	<p>Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed of in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, and Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed of in low lying area.</p>	<ul style="list-style-type: none"> • Pneumatic conveyer system with 3 nos. of dry ash storage silos have been constructed with capacity of 2300 MT each for storage of ash and for its further utilisation and disposal. • Unutilised fly ash is being disposed in the ash pond through HCSD system and Bottom ash is being disposed through LCSD system. • Effluent emanating from the existing ash pond is being recycled and reused for fresh slurry making. No ash pond effluent is being discharged outside. The heavy metal in ash and nearby ground water is being monitored periodically, test reports are enclosed as Annexure-3 for kind reference. • No ash shall be disposed in low lying area without taking consent from OSPCB. <p>Although the EC condition stipulates that no ash shall be disposed in low lying area, subsequent guidelines of MoEF & CC/ CPCB dated 28.08.2019 & MoEF&CC Notification dated 31.12.2021 as amended, identifies reclamation of low lying areas using ash as a potential avenue for ash utilization.</p> <p><u>Further, MoEF&CC Guidelines dated 28.08.2019 replaces the existing conditions (Specific & General) which prohibited the use of fly ash in abandoned mines/ low lying area/ soil conditioner in agriculture.</u></p> <p>OPGC is following the processes given in the above guideline/ notification for use of ash in development of low lying area with proper consent from Odisha SPCB.</p> <p><u>In view of the above MoEF & CC has considered this point to be complied in the personal hearing dated 01.10.2025 which was chaired by Joint Secretary MoEF & CC.</u></p>

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4. (x)	Ash pond shall be lined with HDP/LDP lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	The design & drawing of the Tilia ash pond has been provided by WAPCOS Ltd. OPGC has provided all safety measures for protection of Ash Ponds like Sand Chimney, Rock Toe, Garland Drain, Grass turffing, full-fledged decanted ash water recirculation system etc. OPGC has provided 1.5 mm HDPE membrane as liner for both Tilia Phase I and Tilia Phase II.
4. (xi)	For disposal of Bottom Ash in abandoned Manoharpur mines it shall be ensured that the bottom and sides of the mined-out areas are adequately lined with clay before Bottom Ash is filled up. The project proponent shall inform the State Pollution Control Board well in advance before undertaking the activity.	The requirement will be implemented, and approval/ clearances will be taken from State Pollution Control Board before undertaking filling of mine void using ash.
4. (xii)	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	<ul style="list-style-type: none"> • Considering the ambient conditions, the plant has been designed with induced draft cooling tower. This deviation request was submitted to Director (Thermal), MoEF vide letter No.565 dated 8 -March-2010 • Considering our request, MoEF has granted its permission for use of Induced Draft Cooling System via EC Amendment dated 22/01/2014. The permission is enclosed as Annexure 4 • The blow down of the IDCT is being utilised in ash handling and dust suppression purpose.
4. (xiii)	COC 5.0 will be adopted.	The average COC for Nov'25 was 5.09
4. (xiv)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	<ul style="list-style-type: none"> • 2 Nos of ETP of 200 m³/hour capacity each has been installed for treatment and utilisation of waste water generated from the plant. • Zero effluent discharge is being adhered. Effluent drains have been segregated from the Storm water drains. • Storm water is treated in surface water treatment system and is collected in Rain Water Harvesting Pond. The water is used back in process & in water sprinkling. Excess storm water is discharged ensuring the water quality

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4. (xv)	A sewage treatment plant shall be provided, and the treated sewage shall be used for raising greenbelt/plantation.	<ul style="list-style-type: none"> • 1 MLD capacity Sewage Treatment Plant has been provided for treatment of sewage generated from colony and office buildings of OPGC. • Treated sewage is being used for raising greenbelt/plantation.
4. (xvi)	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.	<ul style="list-style-type: none"> • Based on the detailed study on rain water harvesting technology has already been completed in May-2012 and the report is already finalised. The same was submitted to Central Ground Water Board for review and advice vide letter No. 1612/WE dated 28-June 13. After compliance submission against the observation raised by CGWB and further verification, and the approval accorded by CGWB vide letter no – 5- 22/SER/CGWA/2017-18-1455 on dated 07.12.2017. After getting the approval of the technology, the rain harvesting pond has been constructed. The rain water harvesting pond is operational since May'22.
4. (xvii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	<ul style="list-style-type: none"> • Details of fire protection arrangement at coal yard with lay out map has been submitted to Regional Office, MoEF & CC • Adequate fire hydrant system has been installed in the Coal stock yard and Track hopper site to control spontaneous fire. • Coal stock yard is being managed through Coal first in first out method to reduce spontaneous combustion. • Compaction of coal stock pile is being done at regular intervals to reduce spontaneous combustion.
4. (xviii)	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	<ul style="list-style-type: none"> • Storage facilities for auxiliary liquid fuel have been made in consultation with Dept. of Explosive, Nagpur. Further, the facilities have been brought into operation after getting valid license from Dept. of Explosive, Nagpur. • As regards to Sulphur content, EAC (Thermal) in its monthly meeting held on 18th/19th November 2013 has accorded its consent for the use of commercially available fuel oil. • Emergency response plan has been prepared to handle any emergency
4. (xix)	Regular monitoring of ground water (especially around ash pond and plant areas) shall be carried out	<ul style="list-style-type: none"> • Piezometers have been installed in existing ash pond and 16 nos. of Bore wells have been constructed in the identified locations covering all directions of the plant and ash pond for collection of water sample.

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	<p>by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.</p>	<p>Periodic monitoring for heavy metals is being carried out in the ground water samples from ash pond and surrounding area and reports are being submitted to the Regional Office.</p> <ul style="list-style-type: none"> The analysis of the ground water samples near the existing ash pond & nearby surrounding villages' shows that the concentration of heavy metals is within the permissible limits. Reports enclosed as Annexure-5 for kind reference
<p>4. (xx)</p>	<p>Monitoring surface water quantity and quality shall also be regularly conducted, and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.</p>	<ul style="list-style-type: none"> Surface water and ground water quality monitoring is being done regularly. The reports are enclosed as Annexure-6.
<p>4. (xxi)</p>	<p>Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised, and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.</p>	<ul style="list-style-type: none"> ITPS has a total perimeter length of 12950 m out of which 12350 m has a green belt thickness of more than 100 m Further the overall green belt cover in the plant is more than 34.92% However, in a stretch of 600m only along the MGR line, the provision of 100 m wide green belt is not possible due to layout constraint (Green belt thickness ranges from 20 m to 50 m) District plantation monitoring committee, constituting of Ex Vice Chancellor & Honorary WL Warden, ACF, Jharsuguda Forest division, A.D Horticulture Jharsuguda, Asst. Env. Engineer Jharsuguda & Chief coordinator Eco-Club Jharsuguda. Survey report of District Plantation Committee conform to 34.86% (Plantation Committee visit for the FY 2025-26 completed on dt.11.11.2025, now the green belt percentage increased to 34.92%). Plantation activity is also being taken up every year. Detail

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		<p>plantation status is enclosed as Annexure 7(A). Plantation Committee report enclosed as Annexure 7(B)</p> <ul style="list-style-type: none"> • The average survival rate of plants since 1991 is around 75.8%. However, it is pertinent here to mention that, the survival rate during the last 10 years is 100% which is ensured through AMC contracts and by replacement of dead plants. • OPGC is in process of gap plantation to increase the thickness of the abovementioned 600m length greenbelt.
4. (xxii)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	<ul style="list-style-type: none"> • Construction phase has been completed, however fully equipped 18 bedded Hospital has been established inside the campus for health care of workers. Annual Health check-up of all labours is also being carried out in the same Hospital.
4. (xxiii)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	<ul style="list-style-type: none"> • Arrangements for control of noise in the working areas have been taken in the plant by provision of acoustic enclosures, silencers etc. Sufficient ear protection PPE is provided for all personnel exposed to work in noisy area. • Periodic/ Annual health check is carried out for all employees & contractor partners. • Audiometric test is conducted annually for all employees working in noisy area & no abnormalities has been observed so far. A sample health check-up report has been enclosed as Annexure-8.
4. (xxiv)	Regular monitoring of ground level concentration of SO ₂ , NO _x , RSPM (PM _{2.5} & PM ₁₀) and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the	<ul style="list-style-type: none"> • The project is located inside the existing plant premises. Six online CAAQ monitoring stations to monitor PM₁₀, PM_{2.5}, SO₂, NO_x & CO has been installed within impacted zone. Results are transmitted to SPCB & CPCB server on real time basis. Other than this, Ambient Air Quality is also being monitored through five permanent offline ambient air quality stations and the location of the stations are decided earlier in consultation with the Regional Office. Periodic monitoring is being performed for ambient Hg. • Third party Ambient Air monitoring report has been enclosed as Annexure-9.

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	<p>Regional Office of this Ministry. The data shall also be put on the website of the company.</p>	<ul style="list-style-type: none"> Necessary control measures shall be implemented in case any exceedances are observed. The half yearly compliance report is uploaded in OPGC website. <p>Address: https://www.opgc.co.in/env/Half_Yearly_EC_Compliance_Report.asp</p>																														
<p>4. (xxv)</p>	<p>A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.</p>	<ul style="list-style-type: none"> R & R plan is not applicable as there is no displacement of people due to establishment of the project. <p>Note: The detailed R&R is applicable for Environment Clearance of OPGC-I (2x210 MW) and details are mentioned in the EC Compliance status report of OPGC-1</p> <p>Total 197 families were identified under R & R scheme. Out of 197 families 168 family received the benefit of direct employment in OPGC. Another 17 families received cash in lieu of employment. Balance 12 families which are not traceable, Govt. of Odisha has issued a newspaper advertisement on dated 14.08.2010. However, no families or person came forward to claim their R&R benefits. As the matter is a state subject, OPGCL is committed to follow the direction of State Govt. in this regard News Paper Advertisement is enclosed as Annexure-10</p>																														
<p>4. (xxvi)</p>	<p>An amount of Rs 24.36 Crores shall be earmarked as one-time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 4.87 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for implementation.</p>	<ul style="list-style-type: none"> As the construction period has already completed, the shortfall in CSR Expenditure during construction phase shall be adjusted in CSR Expenditure during operation phase. <p>The details of Expenditure on CSR are as follows:</p> <table border="1" data-bbox="630 1361 1204 1870"> <thead> <tr> <th>Year</th> <th>Stipulated CSR Exp. (Rs. Cr.)</th> <th>Actual CSR Exp. (Rs. Cr)</th> </tr> </thead> <tbody> <tr> <td>Construction Period</td> <td>24.36 Cr</td> <td>22.19</td> </tr> <tr> <td>2020-21*</td> <td>4.87</td> <td>1.0238</td> </tr> <tr> <td>2021-22*</td> <td>4.87</td> <td>0.9554</td> </tr> <tr> <td>2022-23*</td> <td>4.87</td> <td>1.2074</td> </tr> <tr> <td>2023-24</td> <td>4.87</td> <td>4.4081</td> </tr> <tr> <td>2024-25</td> <td>4.87</td> <td>11.8657</td> </tr> <tr> <td>2025-26</td> <td>4.87</td> <td>15.55</td> </tr> <tr> <td></td> <td></td> <td>(Budget)</td> </tr> <tr> <td>Total</td> <td>29.22</td> <td>35.01</td> </tr> </tbody> </table>	Year	Stipulated CSR Exp. (Rs. Cr.)	Actual CSR Exp. (Rs. Cr)	Construction Period	24.36 Cr	22.19	2020-21*	4.87	1.0238	2021-22*	4.87	0.9554	2022-23*	4.87	1.2074	2023-24	4.87	4.4081	2024-25	4.87	11.8657	2025-26	4.87	15.55			(Budget)	Total	29.22	35.01
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		<p>The CSR Expenditures during the years 2020-21 to 2022-23 were low due to COVID. However, OPGC contributed Rs.94.48 Lakh. to District Administration Jharsuguda during this period to for COVID-19 management.</p> <p>Further Rs.1 Crore has been donated to Chief Minister's Relief Fund. Further, the average annual expenditure during last two years is much more than stipulated and sets- off the shortfall in previous years.</p> <p>The detailed breakup of CSR projects for 2025-26 is enclosed as Annexure-11</p>
<p>4. (xxvi i)</p>	<p>As part of CSR programme the company shall conduct need-based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community' development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.</p>	<ul style="list-style-type: none"> • A Socio Economic Survey including need based assessment was undertaken through M/s Sutra in the year 2015-16. • Further as a part of the EIA study, a need based assessment survey has already been carried out through M/s Vimta Labs. • In addition, a comprehensive social impact assessment including need-based assessment study work has been awarded to Sambalpur University. In the first phase of the study, three villages from core zone and three villages from buffer zone has already been completed till November'25. <p>The updated CSR programme list & expenditure has been enclosed as Annexure-12 (Expenditure from Project Cost)</p>
<p>4. (xxvi ii)</p>	<p>The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing fluoride free potable drinking water supply in the nearby</p>	<ul style="list-style-type: none"> • This remains high on OPGC'S agenda. The approved project list sheds adequate light on how OPGC has planned elaborately to provide lasting and sustainable water solutions to people of nearby villages. OPGC has also started mobilising people's opinion and support for sustainable water solutions in collaboration with experts and Jharsuguda district authority. • OPGC has undertaken many projects for construction of new village ponds & deepening of existing ponds. This not only helps in

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	villages and schools shall be undertaken in a time bound manner.	<p>harvesting of rain water which is used for irrigation, washing & bathing but also helps in recharge of ground water.</p> <ul style="list-style-type: none">• At present OPGC is supplying piped drinking water to 17 villages. During summer drinking water supply is being done to 70 villages through tankers. In future the supply of drinking water shall be increase as per demand.
4. (xxix)	Provision 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.	<ul style="list-style-type: none">• Construction phase has been completed.
4. (xxx)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in .	<ul style="list-style-type: none">• Complied. Published in Sambad (Odiya) & New India Express (English) in March 2010.
4. (xxxi)	A copy of the clearance letter shall be sent by the proponent to concern Panchayat, ZilaParisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall	<ul style="list-style-type: none">• Complied in March 2010.

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	also be put on the website of the Company by the proponent.	
4. (xxx i)	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	<ul style="list-style-type: none"> • A separate Environment Management Cell with qualified staff has already been functioning for the purpose. • The detailed structure of the Environment Management Cell is enclosed as Annexure- 13.
4. (xxx ii)	The proponent shall upload the status of compliance of the stipulated EC 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 MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	<ul style="list-style-type: none"> • The status of compliance is being uploaded in Website and reports are also being sent to the said offices. • 2 Nos of LED display boards are installed at the Plant main gate for display of environmental information. <p style="text-align: center;">Website path http://www.opgc.co.in/env/half_comp_powerplant.asp</p>
4. (xxx v)	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e- mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	<ul style="list-style-type: none"> • Being complied. The last half yearly compliance report has been submitted to MoEF&CC vide letter no. ITPS/2686/WE dated 27.05.2025.
4. (xxx v)	The environment statement for each financial year ending 31st 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	<ul style="list-style-type: none"> • Annual Environment Statement (Form-V) of 2X660 MW for the FY 2024-25 had been submitted to OSPCB & MoEF & CC regional office vide ITPS Letter No. 4301/WE, dated 22.09.2025 and web-hosting of Environment Statement has also been done.

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	<p>(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 also be sent to the respective Regional Offices of the Ministry by e-mail.</p>	<p>The annual report for the FY 2024-25 has been enclosed as Annexure-14</p>
<p>4. (xxx vi)</p>	<p>The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same bye-mail to the Regional Office, Ministry of Environment and Forests.</p>	<ul style="list-style-type: none"> • Reporting already commenced since October 2010. The compliance report is being sent to Ministry of Environment and Forests, it's Regional Office, Central Pollution Control Board, State Pollution Control Board and the Regional Office, OSPCB. • Web hosting of EC Compliance status is being done. Website path http://www.opgc.co.in/env/half_comp_powerplant.asp
<p>4. (xxx vii)</p>	<p>Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.</p>	<ul style="list-style-type: none"> • Reporting already commenced since October 2010. • Web-hosting of compliance of stipulated in the EC conditions being done. • Criteria pollutants levels NOx (from ambient air and stack) is being displayed at the main gate of the power plant.

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	Project proponent will up-load the compliance status in their website and up-date the same from time to time at least six-monthly bases. Criteria pollutants levels including NOx (from stack & ambient air) shall be displayed at the main gate of the power plant.	
4. (xxx viii)	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	<p>Pollution Control Expenditure from the period 1st April'2025 to 30th September'2025 are as bellow:</p> <ul style="list-style-type: none"> ➤ ETP and cooling tower operation & maintenance cost -12.5 Lakhs ➤ ESP operation & maintenance cost-65Lakhs ➤ STP operation cost(Excluding manpower cost)-7.5 Lakhs ➤ Plantation cost-2.47Lakhs ➤ Coal Handling Plant-15 Lakhs ➤ General Plant House keeping cost-150Lakhs ➤ Ash Silo area housekeeping cost-100Lakhs ➤ Annual Hazardous waste Audit-0.6Lakhs ➤ Annual Ash Audit-1.5Lakhs ➤ Annual Env. Monitoring cost4Lakhs ➤ Maintenance of Online equipments-26.5Lakhs ➤ Ash Utilization cost-28.22 Cr. ➤ CTO & CTE fee for low lying area-2.87Lakhs ➤ Celebration of Environment Events-1.6Lakhs <p><i>Note: The above cost excludes Main Plant CTO & Authorization fees</i></p>
4. (xxx x)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	<ul style="list-style-type: none"> • The financial closure of the project was done on 23rd November 2012. NTP was issued to BHEL and BGRG on 26th March 2014.
4.(xx xx)	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the	<ul style="list-style-type: none"> • It is being done.

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	Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	
Additional Recommendations to OPGCL by MoEF in EC amendment dated 22.01.2014		
S. No	Recommendations	Compliance status
a	A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an inbuilt continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	<ul style="list-style-type: none"> • The Units # 3 and 4 were commissioned in 2019 & since then coal & ash samples have been analysed twice in 2020 & 2024. • A long-term study based on the annual analysis of coal & ash samples for radio activity & heavy metals is being awarded to BRIT & IMMT. • The radioactivity analysis report is attached as Annexure-15 and the heavy metal content of Coal & Ash test report is attached as Annexure 3 <p>The Units # 3 and 4 were commissioned in 2019 & since then coal & ash samples have been analysed twice in 2020 & 2024.</p> <p>A long-term study based on the annual analysis of coal & ash samples for radio activity & heavy metals is being awarded to BRIT & IMMT.</p>
b	Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT Kanpur.	<ul style="list-style-type: none"> • The monitoring has been periodically carried out through reputed and accredited agency (M/S SGS India Ltd., Asian Geotech consultancy Services,)/Institutions (IMMT, BBSR)
c	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted	<ul style="list-style-type: none"> • Complied. Details of renewable energy initiatives of OPGC has been enclosed as Annexure-16

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	periodically to the Regional Office of the Ministry.	
d	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	<ul style="list-style-type: none"> • Adequate fugitive dust control measures had been implemented to prevent impact during construction phase • Adequate dust suppression systems (water sprinklers & Dry Fog) have been installed to suppress fugitive dust in coal and ash handling area for the operational stage. • Mechanized road sweeping machines deployed for filtering loose dust from the roads. • Fugitive emissions are effectively controlled by OPGC through different mitigative measures & the effectiveness of these measures is reflected in the ambient air quality monitoring data. • Fugitive emissions monitoring is being conducted by Third party NABL Accredited Lab. Monitoring Report Attached as Annexure 2
e	No ground water shall be extracted for use in operation of the power plant even in lean season.	<ul style="list-style-type: none"> • Ground water is not being used. All requirement of water is met from Hirakud reservoir.
f	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	<ul style="list-style-type: none"> • Minimum required environmental flow is being maintained as per the water agreement with Water Resource Department.
g	No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.	<ul style="list-style-type: none"> • No water bodies have been disturbed due to project and will not be disturbed in future due to operation.
h	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with	<ul style="list-style-type: none"> • No ash generated is used for agricultural purpose at present. • For mine void filling of ash, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and

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		<p>2023-24 – 1.17 Lakhs 2024-25 – 10 Lakhs 2025-26 – 114 Lakhs</p> <p>Note: In the PH held on 01.10.2025, Joint Secretary has asked OPGC to apply for amendment of EC in regard to removal of the condition of Green Endowment Plant since OPGC has already surpassed the statutory requirement of 33% green belt.</p>
k	<p>It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.</p>	<ul style="list-style-type: none">• Baseline Survey has been completed by Sutra Consultancy Services, Bhubaneswar and the Final report is already available with OPGC. Monitoring is regularly done by OPGC CSR team.• Projects are currently under execution and effectiveness of implementation will be audited through Govt. Institute.• In addition, a comprehensive social impact assessment including need- based assessment study work awarded to Sambalpur University. In the first phase of the study, three villages from core zone and three villages from buffer zone has already completed till November'25.
l	<p>An Environmental Cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.</p>	<ul style="list-style-type: none">• A separate Environment Management Cell with qualified staff has already been functioning for the purpose. A senior qualified officer heads the Cell (EHS Head) who directly reports to Unit Head (Occupier). The detailed structure of the management cell is enclosed as Annexure-12.
m	<p>The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter</p>	<ul style="list-style-type: none">• OPGC has got well formulated Environment Policy. The policy is enclosed as Annexure-17

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Period April'2025 - September'2025

	<p>suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.</p>	<p>adequate clay lining shall be ascertained in close co-ordination with the State Pollution Control Board.</p>
i	<p>Three tier green belts shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.</p>	<ul style="list-style-type: none">• Green belt already exists all along the plant boundary. Details stated in condition no 4.xxi:• For Ash Pond, SPCB Odisha advised not to go for any plantation on the ash pond dykes looking towards the risk of dyke failure due to tree root channelling. However, the entire ash dykes are turffed with grass to avoid any rain cuts.• OPGC is in process of developing a greenbelt around Tilia Ash pond. In FY 2025-26, 16000 saplings have already been planted through Miyawaki Plantation method. The plantation activity is carried out through Odisha Forest Development Corporation Ltd.• Another 16000 Nos of saplings will be planted in FY 2026-27.
j	<p>A common Green Endowment Fund shall be created, and the interest earned out of it shall be used for the development and management of green cover of the area.</p>	<ul style="list-style-type: none">• OPGC has already achieved green belt % of 34.86 % against the stipulation of 33% and has been carrying out plantation activity by keeping budget provision in its Revenue Budget. The ultimate purpose is for green belt development. <p>The last 9 years expenditure in Green belt development are as below:</p> <ul style="list-style-type: none">2018-19 – 24 Lakhs2019-20 – 34 Lakhs2020-21 – Nil(Due to Covid-19)2021-22 – 0.5 Lakhs2022-23 – 18 Lakhs (17.5 Lakhs to District Administration for development of a Nursery)

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Environment Clearance No-J-13011/59/2008 & Subsequent Amendments
Period April'2025 - September'2025

and other applicable environmental laws and regulations.	
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Prepared By:

Sujata Sahu

Sujata Sahu

Asst. Manager- Environment

Reviewed by:

Parthasarathi Panda

Parthasarathi Panda

Sr. Manager-Environment

Approved by:

ARD

Anjana Ranjan Dash

Director Operation

HYDROGEOLOGICAL STUDIES

Of

ASH POND, PLANT SITE AND ITS SURROUNDING AREAS

At

Near village Banharpali,
Tehsil Lakhanpur, District Jharsuguda, Odisha

Project Proponent



**ODISHA POWER GENERATION
CORPORATION LIMITED**

Prepared By



VISIONTEK CONSULTANCY SERVICES PVT. LTD

(Committed For Better Environment)

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NABL Accreditation & ISO 9001:2015 Certified Lab

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Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251030/ST182	Date of Sample Receiving	31.10.2025
Sample Description	Stack Emission	Date of Testing	31.10.2025-03.11.2025
Date of Sampling	30.10.2025	Date of Reporting	04.11.2025
Location	Unit-3	Test Report No./ULR	TC627025000000852F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Results
1	Total Mercury as Hg	mg/Nm ³	0.014

*****End of Report*****

Report prepared by *D. Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



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TC-6270

STACK EMISSION MONITORING TEST REPORT

Customer Name:	Odisha Power Generation Corporation Limited	Format No-AGRS/FM/45	
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251031/ST183	Date of Sample Receiving	01.11.2025
Sample Description	Stack Emission	Date of Testing	01.11.2025-04.11.2025
Date of Sampling	31.10.2025	Date of Reporting	05.11.2025
Location	Unit-4	Test Report No./ULR	TC627025000000853F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Results
1	Total Mercury as Hg	mg/Nm ³	0.011

*****End of Report*****

Report prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Harmohan Das
Approved by
Name: Harmohan Das
Designation: Quality Manager

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Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/45

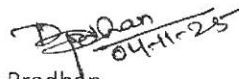
Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251030/ST182	Date of Sample Receiving	31.10.2025
Sample Description	Stack Emission	Date of Testing	31.10.2025-03.11.2025
Date of Sampling	30.10.2025	Date of Reporting	04.11.2025
Location	Unit-3	Test Report No./ULR	TC62702500000852F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

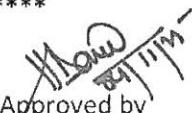
ANALYSIS RESULT

Sl. No.	Parameters	UOM	Protocol	Results
1	Temperature	°C	IS 11255: Part 3 :1985 (RA 2018)	116
2	Velocity of Gas	m/sec	IS 11255: Part 3 :1985 (RA 2018)	25.86
3	Quantity of Gas flow	Nm ³ /hr	IS 11255: Part 3 :1985 (RA 2018)	2505831.70
4	Concentration of Particulate Matter	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	46.55
5	Concentration of SO ₂	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	1224
6	Concentration of NO _x	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	433
7	Oxygen (O ₂)	%	As Per SOP Method	6.11
8	Carbon Dioxide (CO ₂)	%	As Per SOP Method	13.04

*****End of Report*****

Report prepared by 
Name: Bhagyashree Pradhan
Designation: Chemical Analyst




Approved by
Name: Harmohan Das
Designation: Quality Manager

Note:

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STACK EMISSION MONITORING TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251031/ST183	Date of Sample Receiving	01.11.2025
Sample Description	Stack Emission	Date of Testing	01.11.2025-04.11.2025
Date of Sampling	31.10.2025	Date of Reporting	05.11.2025
Location	Unit-4	Test Report No./ULR	TC627025000000853F

GENERAL INFORMATION ABOUT STACK		PHYSICAL CHARACTERISTICS OF STACK	
Stack Connected To	ESP	Height of the Stack from GL	275 Meter
Emission Due To	Burning of Coal	Diameter of the Stack	7 Meter
Material of Construction Of Stack	RCC with MS Flue Can	Height of the sampling from GL	72 meter
Shape of Stack	Circular	Area Of Stack/Duct	38.465 M ²

ANALYSIS RESULT

Sl. No.	Parameters	UOM	Protocol	Results
1	Temperature	°C	IS 11255: Part 3 :1985 (RA 2018)	130
2	Velocity of Gas	m/sec	IS 11255: Part 3 :1985 (RA 2018)	25.61
3	Quantity of Gas flow	Nm ³ /hr	IS 11255: Part 3 :1985 (RA 2018)	2560854.38
4	Concentration of Particulate Matter	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	47.23
5	Concentration of SO ₂	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	1238
6	Concentration of NO _x	mg/Nm ³	IS 11255: Part 1 :1985 (RA 2019)	442
7	Oxygen (O ₂)	%	As Per SOP Method	6.09
8	Carbon Dioxide (CO ₂)	%	As Per SOP Method	13.83

*****End of Report*****

Report prepared by
Name: Bhagyashree Pradhan
Designation: Chemical Analyst

Bhagyashree Pradhan
05-11-25



Approved by
Name: Harmohan Das
Designation: Quality Manager

Harmohan Das
05/11/25

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TC-6270

FUGITIVE MONITORING TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS250922/WZ21	Date of Sample Receiving	NA
Sample Description	Fugitive Monitoring	Date of Testing	22.09.2025-29.09.2025
Date of Sampling	22.09.2025-29.09.2025	Date of Reporting	03.10.2025
Location	Inside Plant	Test Report No./ULR	TC627025000000738F

ANALYSIS REPORT

Sl. No.	Sampling Location	Date of Sampling	UOM	Result
1	Rengali Ash Pond	22.09.2025	µg/m ³	332.25
2	Crusher House	23.09.2025	µg/m ³	564.37
3	Tilia Ash Pond	24.09.2025	µg/m ³	392.21
4	Track Hopper Unit-1&2	27.09.2025	µg/m ³	522.48
5	Silo (Fly Ash)	29.09.2025	µg/m ³	384.82

*****End of Report*****

*Note- As Per CPCB Guidelines, Permissible Exposure Limits for Industrial Area is 2000 µg/m³.

Report prepared by *B. Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *H. Das*
Name: Harmohan Das
Designation: Quality Manager

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website : www.agsrindia.com



सीएसआईआर - खनिज एवं पदार्थ प्रौद्योगिकी संस्थान
(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
भुवनेश्वर-751013, ओडिशा, भारत
CSIR - INSTITUTE OF MINERALS & MATERIALS TECHNOLOGY
Council of Scientific & Industrial Research
Bhubaneswar - 751013, Odisha, INDIA



TEST REPORT

Ref. No. LT02-CCD/23/60

Date: 29.12.2023

Name & Address of the Party:

Mr. Parthasarathi Panda
Sr. Manager (Env.)
IB Thermal Power Station
Odisha Power Generation Corporation
Banharpalli, Jharsuguda
PIN.768234
Mobile: 7606011609

Sample Details:

Two coal & two ash samples

Date of Receiving:

05.12.2023

Date of Conducting Test:

12.12.2023

Date of Completion of Test:

21.12.2023


Method Adopted/ Standard:

Classical analysis, AAS & ICP-OES.

Detail Report:

Sl. No.	Parameter	Concentration in test samples, mg/kg (ppm)			
		Coal sample-1	Coal sample-2	Fly Ash	Bottom Ash
1.	Pb	20.1	21.2	77.3	19.5
2.	Ni	21.9	29.24	63.65	49.25
3.	Cd	0.27	0.23	0.49	0.71
4.	As	72.5	57.1	94.2	88.4
5	Hg	0.18	0.20	0.16	0.12
6	Cr	44.0	57.5	164.7	151.5
7	Sr	76.6	89.8	165.8	177.3
8	Cu	27.1	32.4	85.9	66.9
9	Zn	42.3	55.4	162.4	66.2
10	Se	0.48	0.42	0.89	0.68

for Chief Scientist
(Dr. B. Nayak)
Chief Scientist
& Head, CCD
29/12/2023


(Dr. J. Das)
Pr. Technical Officer
Central Characterization Dept.

N.B: The samples are not drawn by CSIR-IMMT. Liability, if any, for the institute arising in connection with the testing shall be subject to ceiling of amount received by the institute from the client. The report should not be interpreted in part.



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TC-6270

PIEZOMETER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS250905/0324	Date of Sample Receiving	05.09.2025
Sample Description	Piezometer	Date of Testing	05.09.2025-08.09.2025
Date of Sampling	04.09.2025	Date of Reporting	13.09.2025
Sample Quantity	1 litre	Environmental Condition	Temp.-25.8°C & RH- 65%
Location	Piezometer-1(Tilia Ash Pond)	Test Report No./ULR	TC627025000000675F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Result
1	pH	IS 3025 (P-11):2022	--	6.55
2	Total Suspended Solids	IS 3025 (P-17):2022	mg/l	7
3	Total Dissolved Solids	IS 3025 (P-16):2023	mg/l	382
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	12.63
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2024	mg/l	0.62
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F (D)	mg/l	0.058
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	BDL
8	Lead as Pb	APHA 24 th Edition (2023), 3500-Pb	mg/l	BDL
9	Mercury as Hg	APHA 24 th Edition (2023), 3500 Hg	mg/l	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023), 3500-Cd	mg/l	BDL
11	Arsenic as As	APHA 24 th Edition (2023), 3500-As	mg/l	BDL
12	Strontium as Sr	APHA 24 th Edition (2023), 3500-Sr	mg/l	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023), 3500- Cr	mg/l	BDL
14	Total Chromium as Cr	APHA 24 th Edition (2023), 3500- Cr	mg/l	BDL

*****End of Report*****

Report prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
Note:



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

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website : www.agrsindia.com



J-13011/59/2008 -IA.II (T)
Government of India
Ministry of Environment & Forests

BY SPEED POST

Paryavaran Bhawan
CGO Complex, Lodi Road
New Delhi-110 003
Dated: 22.01.2014.

To
M/s Odisha Power Generation Corporation Ltd.
Zone-A, 7th Floor, Fortune Towers,
Bhubaneswar- 751 023,
Odisha.

Ph: 0674-2303765; Fax: 0674-2303755/56

Sub: Expansion of existing Coal Based Thermal Power Plant by addition of 2x660 MW (Unit 3 & 4) at Village Banaharpalli, in Jharsuguda Distt., in Orissa by M/s Odisha Power Generation Corporation Ltd. - reg. Amendment and Extension of validity of Environmental Clearance.

Sir,

This has reference to your letters dated 05.06.2013 and 18.09.2013 requesting for amendment and extension of validity of environmental clearance accorded for the above mentioned project.

2. The matter was placed before the Expert Appraisal Committee (Thermal Power) in its 4th Meeting held during November 18-19, 2013. In acceptance of the recommendation of the Expert Appraisal Committee (Thermal Power) and in view of the information/clarification furnished by you, with respect to the above mentioned power project, the following amendments are made in two conditions i.e. (xii) & (xviii) specified in the earlier EC accorded to you vide our letter of even no. dated 04.02.2010.

- a) The condition no. (xii) of Para No.4 shall be read as "Closed cycle cooling system with induced draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms" **instead of**

"Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms."

- b) The condition no. (xviii) of Para No.4 shall be read as "Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil" **instead of**

"Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation with Department of Explosives, Nagpur. Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil."

3. Further, under Para no.4 of this Ministry's letter of even no. dated 04.02.2010, after the condition no. (xl), the following conditions shall be inserted:

- (xli) A long term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.
- (xlii) Continuous monitoring for heavy metals in and around the existing ash pond area shall be immediately carried out by reputed institutes like IIT Kanpur.
- (xliii) Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.
- (xliv) Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.
- (xlv) No ground water shall be extracted for use in operation of the power plant even in lean season.
- (xlvi) Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.
- (xlvii) No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.
- (xlviii) Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.
- (xlix) Three tier green belt shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.
- (l) A common **Green Endowment Fund** shall be created and the interest earned out of it shall be used for the development and management of green cover of the area.
- (li) It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time.
- (lii) An Environmental Cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and

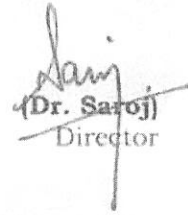
qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.

(liii) The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.

4. All other conditions mentioned in this Ministry's letter of even no. dated 04.02.2010 shall remain the same.

5. Regarding the extension of validity of environmental clearance, since the validity will only expire in Feb, 2015, you may request this Ministry along with updated Form-I only before 6 months from expiry of the validity of EC, if required.

This issues with the approval of the Competent Authority.


(Dr. Saroj)
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi 110001.
2. The Secretary (Environment), Environment Department, Government of Orissa, Bhubaneswar.
3. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi-110066.
4. The Chairman, Orissa State Pollution Control Board, A-118, Nilkanta Nagar, Unit - VIII, Bhubaneswar- 751 012.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi- 110032.
6. The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment & Forests, A/3, Chandesekhapur, Bhubaneswar - 751023.
7. The District Collector, Jharsuguda District, Orissa.
8. Guard file.


(Dr. Saroj)
Director



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TC-8270

PIEZOMETER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharपाली, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS250905/0325	Date of Sample Receiving	05.09.2025
Sample Description	Piezometer	Date of Testing	05.09.2025-08.09.2025
Date of Sampling	04.09.2025	Date of Reporting	13.09.2025
Sample Quantity	1 litre	Environmental Condition	Temp.-25.3°C & RH- 67%
Location	Piezometer-2(Tilia Ash Pond)	Test Report No./ULR	TC62702500000676F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Result
1	pH	IS 3025 (P-11):2022	--	6.62
2	Total Suspended Solids	IS 3025 (P-17):2022	mg/l	6
3	Total Dissolved Solids	IS 3025 (P-16):2023	mg/l	370
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	11.17
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2024	mg/l	0.69
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F ⁻ (D)	mg/l	0.064
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	BDL
8	Lead as Pb	APHA 24 th Edition (2023) ,3500-Pb	mg/l	BDL
9	Mercury as Hg	APHA 24 th Edition (2023) ,3500 Hg	mg/l	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023) ,3500-Cd	mg/l	BDL
11	Arsenic as As	APHA 24 th Edition (2023) ,3500-As	mg/l	BDL
12	Strontium as Sr	APHA 24 th Edition (2023) ,3500-Sr	mg/l	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023) , 3500- Cr	mg/l	BDL
14	Total Chromium as Cr	APHA 24 th Edition (2023) , 3500- Cr	mg/l	BDL

*****End of Report*****

Report prepared by
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
Note:

Bhagyashree Pradhan
13-09-25



Approved by
Name: Harmohan Das
Designation: Quality Manager

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TC-6270

GROUND WATER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251025/0395	Date of Sample Receiving	26.10.2025
Sample Description	Ground water	Date of Testing	26.10.2025-31.10.2025
Date of Sampling	25.10.2025	Date of Reporting	31.10.2025
Sample Quantity	2 litre	Environmental Condition	Temp.-26.9°C & RH- 62%
Location	Sansartikira Village	Test Report No./ULR	TC627025000000840F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Standard as Per IS-10500:2012	Result
1	pH at 25 °C	IS 3025 (P-11):2022	--	6.5-8.5	6.56
2	Total Suspended Solids at 104°C	IS 3025 (P-17):2022	mg/l	NA	7
3	Total Dissolved Solids at 180 °C	IS 3025 (P-16):2023	mg/l	500-2000	639
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	30-100	17.01
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	1.0- NA	0.46
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F (D)	mg/l	1.0-1.5	.058
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	0.05-1.5	BDL
8	Lead as Pb	APHA 24 th Edition (2023) ,3500-Pb	mg/l	0.01- NA	BDL
9	Mercury as Hg	APHA 24 th Edition (2023) ,3500 Hg	mg/l	0.001- NA	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023) ,3500-Cd	mg/l	0.003- NA	BDL
11	Arsenic as As	APHA 24 th Edition (2023) ,3500-As	mg/l	0.01- NA	BDL
12	Strontium as Sr	APHA 24 th Edition (2023) ,3500-Sr	mg/l	0-0.004	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.1-NA	BDL
14	Total Chromium as Cr	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.05- NA	BDL

*****End of Report*****

Report prepared by
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
Note:

D. Pradhan
21-10-25



Approved by
Name: Harmohan Das
Designation: Quality Manager

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TC-6270

SURFACE WATER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251026/0390	Date of Sample Receiving	27.10.2025
Sample Description	Surface water	Date of Testing	27.10.2025-31.10.2025
Date of Sampling	26.10.2025	Date of Reporting	31.10.2025
Sample Quantity	2 litre	Environmental Condition	Temp.-26.7°C & RH- 63%
Location	Reservoir Water	Test Report No./ULR	TC627025000000835F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Result
1	pH	IS 3025 (P-11):2022	--	6.78
2	Total Suspended Solids	IS 3025 (P-17):2022	mg/l	8
3	Total Dissolved Solids	IS 3025 (P-16):2023	mg/l	56
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	3.40
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	1.11
6	Fluoride as F	APHA 24 th Edition(2023), 4500-F (D)	mg/l	0.86
7	Copper as Cu	APHA 24 th Edition (2023), 3500-Cu	mg/l	BDL
8	Lead as Pb	APHA 24 th Edition (2023), 3500-Pb	mg/l	BDL
9	Mercury as Hg	APHA 24 th Edition (2023), 3500 Hg	mg/l	BDL
10	Cadmium as Cd	APHA 24 th Edition (2023), 3500-Cd	mg/l	BDL
11	Arsenic as As	APHA 24 th Edition (2023), 3500-As	mg/l	BDL
12	Strontium as Sr	APHA 24 th Edition (2023), 3500-Sr	mg/l	BDL
13	Hexavalent Chromium as Cr6+	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.006
14	Total Chromium as Cr	APHA 24 th Edition (2023), 3500- Cr	mg/l	0.017
15	BOD at 27°C (3 days)	IS 3025 (Part-44) : 2023	mg/l	14.30
16	COD of O2 at 150°C	IS 3025 (Part-58) : 2023	mg/l	28

*****End of Report*****

Report prepared by *B. Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Harmohan Das
Approved by
Name: Harmohan Das
Designation: Quality Manager

Note:

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NABL Accreditation & ISO 9001:2015 Certified Lab

Regd. Off : Plot No. -4704/5004, Adimata Colony,
Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

SURFACE WATER TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited		
Customer Address	IB Thermal Power Station Banharpalli, Jharsuguda, Odisha- 768234		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS251026/0391	Date of Sample Receiving	27.10.2025
Sample Description	Surface water	Date of Testing	27.10.2025-31.10.2025
Date of Sampling	26.10.2025	Date of Reporting	31.10.2025
Sample Quantity	2 litre	Environmental Condition	Temp.-26.7°C & RH- 63%
Location	Tilia Village	Test Report No./ULR	TC627025000000836F

ANALYSIS RESULT

Sl. No	Parameters	Testing Methods	Unit	Result
1	pH	IS 3025 (P-11):2022	--	6.63
2	Total Suspended Solids	IS 3025 (P-17):2022	mg/l	3
3	Total Dissolved Solids	IS 3025 (P-16):2023	mg/l	158
4	Magnesium as Mg	APHA 24 th Edition (2023) 3500-Mg (B)	mg/l	5.34
5	Iron as Fe	IS 3025 (P-53):2003,(Cl.6) RA-2019	mg/l	0.041
6	Fluoride as F	APHA 24th Edition(2023), 4500-F-(D)	mg/l	0.37
7	Copper as Cu	APHA 24th Edition (2023), 3500-Cu	mg/l	BDL
8	Lead as Pb	APHA 24th Edition (2023), 3500-Pb	mg/l	BDL
9	Mercury as Hg	APHA 24th Edition (2023), 3500 Hg	mg/l	BDL
10	Cadmium as Cd	APHA 24th Edition (2023), 3500-Cd	mg/l	BDL
11	Arsenic as As	APHA 24th Edition (2023), 3500-As	mg/l	BDL
12	Strontium as Sr	APHA 24th Edition (2023), 3500-Sr	mg/l	BDL
13	Hexavalent Chromium as Cr6+	APHA 24th Edition (2023), 3500- Cr	mg/l	0.013
14	Total Chromium as Cr	APHA 24th Edition (2023), 3500- Cr	mg/l	0.021
15	BOD at 27°C (3 days)	IS 3025 (Part-44) : 2023	mg/l	7.30
16	COD of O2 at 150°C	IS 3025 (Part-58) : 2023	mg/l	18

*****End of Report*****

Report prepared by *Bhagan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst
21-10-25



Approved by *Mou*
Name: Harmohan Das
Designation: Quality Manager
21/10/25

Note:

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Annexure- V (B)						
ODISHA POWER GENERATION CORPORATION LTD						
IB THERMAL POWER STATION						
YEAR WISE TREE PLANTATION DETAILS OF OPGC AT ITPS						
Location	Name of Agency	Year	No.of trees planted	Name of the Species	No.of trees alive	Plant Area
						Green Belt & High density natural green belt
Colony,Guest House,Hallpad, Periphery,Pump House,Filter House,Stores etc.	Local agencies	1991-92/92-93	12,000	Akashia	9,550	
Periphery of Boundary Wall (Green Belt)	O.P.G.C.	1992-93/93-94	38,500	Sirish Chhatim Kadamba Panash	23,300	
Vacant place in front of SBI, Old Hanuman Temple back side of Store yard,colony road side.	Sidhartha agency, Jharsuguda.	1993-94/94-95	23,800	Neem Bottle brush Bottle Palm Chakunda	15,000	
i) Back side of Autobase, Falsamunda village area.	ii) Sidhartha agency, Brukshyaropan Samiti, Jharsuguda.	1994-95/95-96	20,000	Jhaun Sisoo Golmohar	15,000	
ii) Coal yard side, either sides of main roads, Plant boundary, Railway lines, inside area between D.M.Plant, R.W.pump house and compound wall.	ii) Departmentally, Total:-		37,000	Eucalyptus Gambhari Jarul Litchi Amba Baula	31,155	
Both sides of Rly.inline out side the plant boundary and Ash Pond area.	i) Green channel, Brukshyaropan Samiti & 3 Nos.of Club and Yubak Sangha	1995-96/96-97	40,000	Radhachuda Deodaru Karanja Pijuli		
Jhawn & Plantation coal handling plant area & other species on both sides of roads inside plant.	ii) Departmentally		34,500	Saguan baxa Mandar Rangani		
Fuel Oil Pump house area, School,Hospital,Police station Outer periphery of children Parks,Playgrounds etc.	iii) Local agencies Total:-		5,500	Areca Palm Juniperous china Palm Musunda	65,000	
Ash Pond	i) Brukshyaropan Samiti		5,000	Karabira Golap		
	ii) Departmentally		5,000	Thuja		
Both side of Security road.	i) Brukshyaropan Samiti		5,000			
	ii) Departmentally		5,000			
Ash Pond	Total				15,500	
Ash Pond		1998-99/99-00	5,500		4,500	
Ash Pond	By agencies	2000-2001	5,058		5,000	
CHP & Plant	-do-		5,966		4,842	
Colony	-do-		11,500		10,000	
Ash Filling Area(low lying area), Colony,Warehouse,SVM School(ITPS), Rengali School	-do-	2006-07	1,800		1200	
Inside Plant campus	-do-	2007-08	3,000		2300	
Distribution of fruit bearing tree in Periphery villages	-do-	2008-09	4,000	Mango, Lemon	2100	
Block Plantation in association with District Environmental Society	Majhi		3,000	Teak	2500	
Fruit bearing tree plantation at Gujapar and in Schools	do		350	Mango	50	
CHP & Learning Centre on Earth Day	Self	2009-10	120	Neem	75	
World Env Day	Self		150	Mango	90	
Govt. Land near Rengali Nursery	Karunakar Sahu		5000	Neem, Karanja, Kadamba, chakunda etc	2000	
Vatarika & Adhapada Mandir- 150 nos fruit & flower tree, Inside Colony vacant place- 100 neem trees, World Env day- 150 neem & Devdaru tree inside Plant Premises, Gujapahar- 200 Fruit bearing trees, 800 Fruit bearing, Radha Chuda etc planted in Binika & Banaharpali through villagers	Self & through villagers	2010-11	1500	Neem, Devdaru, Radhachura, Mango, Guava, Lemon, Jamun, Coconout, Lichi & Flower Plants	900	
Vacant space in between Boiler area scrap yard & clarifiers	Self	2010-11	100	Neem	70	
Inside Colony Vacant Places	Self	2011-12	150	Mango, Lemon, Guava	100	1227.39
Vacant space at Coal Handling Plant	Self	2012-13	350	Neem, Devdaru	200	
Distribution of fruit bearing & Forest plant species in Periphery villages, 2000 nos	Self	2012-13	2000	Teak, Mango, Lemon	1000	
Avenue Plantation at Banharpali & Ash Pond Road & 100 nos inside Plant premises	Self	2013-14	1300	Kadamba, Limba, Karanga, Radhachuda. Teak, Devdaru etc	900	
Sapling Distribution, 6000 nos	through nearby villagers		6000	Teak, Guava, Jackfruit, Dalimb etc	3000	
Sapling Distribution, 5000 nos	through nearby villagers	2014-15	5000	Teak, Guava, Teak, etc	2500	

Block & Avenue Plantation (OPGC old Pump House vacant space , old Adhapada Shiv Temple premises near Banaharpali & Tarrini Temple premises at Pump House Para)	Self		3000		1050	
Sapling Distribution	through nearby villagers, 4480 nos	2015-16	4480	Teak, Baula, Guava, Lemon, Karanj etc	2100	
Plantation inside Plant and Colony	Self		700		650	
Plantation inside Plant and Colony	Self	2016-17	200	Baula, Mango	192	
Plantation inside Plant	Self		8000	Karanja, Neem, Baula	8000	
Saplings Distributed, 15000 nos	Others			Grafted Mango, Guava, Teak, etc		
Plantation inside plant & township * 4000 Nos of mango sapling distributed	Self	2017-18	1885	Kadamba, Neem, Bakul, Siris & Karanja	1880	
Gap Plantation	Self	2018-19	10725	Baula, Neem, Karanj, Mango, Arjun, Sisoo, Teak.	10725	
Plantation inside Plant and Colony	Self	2019-20	265	Karanj, Neem Bakul	265	
Plantation inside Plant and Colony	Self	2020-21	300	Bakul	300	
Plantation inside Plant and Colony	Self	2021-22	200	Bakul, Neem, Karanj, Sisoo	200	
Plantation inside Plant and Colony	Self	2022-23	950	Terminalia, Baula, Neem, Karanja, Arjun	950	1.25
Plantation inside Plant and Colony	Self	2023-24	900	Terminalia, Baula, Neem, Kanchan	900	1
Plantation inside Plant and Colony	Self	2024-25	2500	Terminalia, mango, jack fruit & neem	2500	1.15
Plantation inside Plant and Colony	Self	2025-26 (Till 18.09.2025)	17280	Mango, jack fruit & neem	17280	0.25
Total			3,44,529		2,64,824	428.65
% Survival					76.9	
Green Belt%					34.92	

Total Area of Green Belt

In addition to above plantation at ITPS ,Compensatory Afforestation has been done by OPGC over 260 Ha. non-forest land in Deogarh, through Forest Department, Govt. Of Odisha.

Parthasarathi Panda

Parthasarathi Panda
Sr. Manager Environment

**REPORT OF THE PLANTATION MONITORING COMMITTEE OF THE DISTRICT
ENVIRONMENT SOCIETY, JHARSUGUDA, 2024-25.**

INTRODUCTION

The Jharsuguda District Environment Society constituted a Plantation Monitoring Committee on dt.03.04.2013 under the Chairmanship of former Collector-Cum District Magistrate, Sri Niranjan Sahu, Divisional Forest Officer, Sri Aswini Kumar Kar, Former Vice Chancellor Sambalpur University, Sri Dhurbaraj Naik, Honorary Wildlife Warden for Jharsuguda District as its Chief, Sri Prahallad Naik Chief Coordinator District Eco-Club Coordination Committee, Jharsuguda, former ACF, Jharsuguda Forest Division, Sri Basil Barla, DSP of Police, Tahasildar, Jharsuguda, ADHO, Jharsuguda, RO, SPCB, Jharsuguda and all DES and DECC Members are attend. Since then, the committee is inspecting industrial premises at least twice every year for monitoring the plantation activity.

Environment can be defined as a sum total of all the Living or biotic Elements (Animal, Plant, Forest, Fisheries & Birds) and non-living elements or non-biotic element (Water, Land, Sunlight, rocks & Air) and there effect that influence human Life. Industrialization has led to habitat destruction through deforestation, mining and other human Activities. As per the Air Quality Index (AQI) of Jharsuguda District (raising from 112 to 123) is unhealthy for Sensitive groups which can be immediately felt. Healthy individuals may experience difficulty in breathing and throat irritation with prolonged exposure. In order to protect/conservate the Environment massive plantation programme inside & outside the plants/Mines is badly necessary. in this Connection the Collector & District Magistrate Jharsuguda had Convened the district Environment Society meeting on Dated 20.07.2024 at 11.30 AM in the DMF conference Hall, Jharsuguda where all the Official of Corporate Sectors were also present in the meeting and the Plantation target of the current Year 2024-25 has been fixed to the all Corporate Sectors for greenery. Further they are instructed to cover the 33.3% greenery of the total acquired land or as per the specific term & conditions of the Environmental clearance of the concerned Corporate Sector. In order to review to the census of tree planted over the Years, the Divisional Forest Officer, Jharsuguda in his Letter No 4719(19)4F(Miss) Dt 17.08.2024 had instructed all the Corporate Sector of his District to Co-operate District Plantation Committee members during their visit.

Inspection (2024-25)

The Plantation Monitoring Committee comprising of Sri Prahallad Naik, Honorary Wildlife Warden-Cum-Chief Coordinator, Jharsuguda, Deputy Collector, Jharsuguda, Tahasildar, Jharsuguda, Asst. Director, Horticulture, Jharsuguda, Asst. Environment Engineer, State Pollution Control Board, Jharsuguda, DIPRO, Jharsuguda, DES Members Sri Tapas Rai Choudhary, Prof. Tahalu Sahu, Sri Trinath Gual, Sri Bijay Behera, Sri Benudhar Choudhary, Sri Abhisekh Lath & Asst. Conservator of Forests, Jharsuguda Forest Division inspected various industrial premises as per the following schedule.

Date	Industries/mines inspected
04.09.2024	IB Valley, MCL Lakhanpur
05.09.2024	NLC Talabira, LN Metallicks Sriपुरा
06.09.2024	OPGC Banharपाली, Ind Barath, JSW
11.09.2024	Sesa Starlite (Vedanta Alumina) IOC
12.09.2024	TRL, Global Coal
13.09.2024	SMC Power, Comcast Stell & Power MSP Metallicks
20.09.2024	Ultra Tech Cement, Fortise Chemicals, Jay Hanuman, Seven Star
21.09.2024	MCL Orient Area, TPSI Lahundabud.

GENERAL REMARKS:

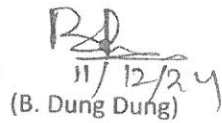
1. It was not intended to conduct the census of trees planted over the years. An overall estimation of the greenery in the accessible areas with the industrial areas was made which protects the health condition of the employees working inside. Also, the Govt. land allotted to them outside the plant where also inspected the main objective of district administration to make greenery around the urban areas as well as affected areas to protect the environment of this district.
2. They are advised to plant environment friendly species of plants which absorbed CO₂ gas in more quantity and fruits bearing trees as well.
3. It was observed some of the industries/mines have not achieved their target assigned to them. They are advised to makeup the deficiency by end of the year.
4. To plant the trees is not important. The survival of the plant is most important. They are advised to take care of the trees with utmost care and dedication.
5. The committee observed that, some of the industries have planted outside the plants in scattered areas (in less than half acer areas), which is not advisable. They should be applied for one or more patch area at least more than two acers.
6. Further, they are advised to adopt 4 to 5 adjacent villages so that, the negative mind set of villagers towards the plants will be removed.
7. All the corporate sector are advised to follow their environment clearance points and display it on their respective websites for public visibility and social audit.
8. In some point of dumping area of MCL IB-Valley area extra funds may be provided for easy transportation/communication of labours to the top point, where plantation have been carried out. Further, they are also instructed to provide facility of Water Tanker in the said area.

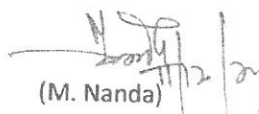
Sl No.	Name of Industries/ Mines	Total land Acquired (Ac)	33.3% of area (Ac)	Land planted (Ac) up to 2023-24	Plantation Achieved during 2024-25		Total area planted inside premises (Ac) up to 2024-25	Total nos. of saplings planted during 2024-25 (inside & outside)	Remarks/ percentage Achieved
					Inside premises (Ac/No)	Outside premises (Ac/Km)			
01	MCL IB Valley	3474.558	1158.07	1132.79	12.35	180 Ac. 116800 nos	1145.25	2000	32.96%
02	MCL Orient Area (Contain data of 5 nos of mines)	361.441 Ac.	119.274 Ac	161.274 Ac.	11.268 Ac.	-	148.618 Ac.	10000	
03	Integrated Lakhanpur-Belpahar-Lilari OCP Lakhanpur Area, MCL	10870.77 Ac	3587.35 Ac.	1799.55 Ac.	29.65 Ac. (7500 nos are being carried out)	149.50 Ac. 76000 nos	1799.55 Ac. have already been planted 26.65 Ac. work in progress	76000 nos outside lease area 7500 nos inside lease area (work in progress)	
4	SMC Power Generation Limited, Unit-2, Badmal	196.188 AC	65.3 AC	39.1 AC	13.06 AC	NIL	52.16 AC	6500	
5	SMC Power Generation Limited Hirma, Jharsuguda	275.63 Ac	90.95 Ac	104.79 Ac	550 nos of saplings	50 nos of saplings	0.74 Ac.	600 nos of saplings	
6	JSW Energy (Utkal) Limited	Total Land Area-592 Acre	196 Ac.	25.0 Ac. (3000 nos)	23 Acre/ 15000 nos	2 Acre/ 1000 nos	90 Acre	60000 (55000+5000)	12.7 %
7	Vedanta Ltd., Jharsuguda Smelter & CPP	1876.10	619.12	619.12	Additional area Nil/ 3000 No sapling planted in gap Filling	50 acres	619.12	3000 (inside premises)	33% achieved as per EC. Further Planting 1 Lakhs Sapling under Matrivan Project in FY 2024-25
8	Vedanta Ltd., Jharsuguda 2400 MW TPP	534.14	176.26	176.26	Additional area Nil/		176.26	2000 (inside premises)	

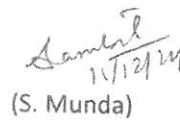
					2000 No sapling planted in gap Filling				
9	TRL Krosaki Refractories Ltd.	156.27	54.60	.513 Ha. 1300 Sapling		4 Ha. 1000 Sapling	.913 ha.	2300 nos	34.94 %
10	Integrated Lakhanpur-Belpahar-Lilari OCP, Lakhanpur Area, MCL	10870.77	3587.35	1799.55	29.65 / 7500 nos. are being carried out	149.50 / 76000 nos.	1799.55 Acre have already been planted. 29.65 Acre work is in process	76000 nos. outside lease area 7500 nos. inside lease area (work is in process)	
11	L N Metallics Limited	29.64	9.87	10.16	250	2000	10.16	2250	
12	Talabira II & III OCP, NLC India Limited	Total lease area- 4729.649 Total acquired land 4162.236	1560.78	Planted - 7.413 Natural vegetation - 2103.96	18680 nos (18.532 Ac)	16000 nos (4.942 Ac)	25.945	34680 Nos	Green cover exist over 51.17 % of acquired area
13	2x210MW unit31 & Unit #2 & 2x660 MW unit#3 & Unit# IN Thermal Power Station of Odisha Power Generation Corporation Ltd.	1227.39	405	427.25	0.61	5	427.86	4700	34.86
14	IB Valley Coal Washery (10MTPA), MCI	90.36	30.08	21.35	3.78/24 50 nos of trees planted	Nil	25.13 Ac have already been planted 4.95 Ac plantation work under progress	2450 nos of trees planted inside premise Plantation work for 3200 nos of saplings is	

								under progress	
15	Seven Star Steel Ltd.,	53.50	17.82	17156	744	1350	18.80	2094	35.14
16	Odisha Metalics Pvt. Ltd., Marakuta	256.54 Ac.	84.66 Ac	9.88 Ac.	6000 nos of saplings	1500 nos of saplings	12.35 Ac	7500 nos of saplings	100%
17	TPSL Lahandabud	178	71.19 Ac 40% of the total land	71.19A c.	5842	2020	Replantatio n died plants 5.5 Ac. Scattered	7862	100%
18	Ultratech Cement Ltd.	165 Ac.	55	52.8 Ac	2288 nos 2.47 Ac.	400 nos (0.4 Ac.0	55.28 Ac	2688	33.5%
19	Jai Hanuman Udyog	37.00 Ac.	12.5 Ac.	500 nos	500 nos	Patrapali to Jaihanuman (500 nos)	12.5 Ac.	1000	100%
20	OPGC, Banharpali	1227.39 Ac.	405.00 Ac.	427.25	0.61 Ac.	5	427.86 Ac.	4700	34.86 %
21	Concast Steel & Power SMC Power Unit-I, Hirma	275.63 Ac.	90.95 Ac.	104.79 Ac.	1.10 Ac.	Nil	105.98 Ac.	450 nos	
22	Fortis Chemical Pvt. Ltd.	8.02 Ac.	2.64 Ac.	1045 nos	245 nos	Both side of the road between Boundary of Apar Industries to Kendutikr a village	2.64 Ac.	1045	100%
23	APPAR	13 Ac.	4.29 Ac.	2.29 Ac.	1.25 Ac.	0.75 Ac.	3.54 Ac.	2032	27.23 %


E. Naik) 11/12/24


11/12/24
(B. Dung Dung)


(M. Nanda)


11/12/24
(S. Munda)

(S. Kumbhar)

Honorary,
WL Warden-cum-
Chief Coordinator DECC

ACF,
Jharsuguda Forest

ADHO,
Jharsuguda

Asst. Env. Engineer,
Jharsuguda

Tahasildar,
Jharsuguda

ANNUAL HEALTH CHECK-UP DATA 2024-25						
	TOTAL EMPLOYEES	UNDERGONE CHECK-UP	X-RAY	SPIROMETER	AUDIOMETER	COLOUR VISION
OPGC-I	EMPLOYEES	254	252			
	CONTRACTOR	1047	865			
	TOTAL		115	217	139	85
OPGC-II	EMPLOYEES	235	233			
	CONTRACTOR	1853	1570			
	TOTAL		154	629	308	626

All the above task conducted & all found O.K at the time of examination.





ASIAN GEOTECH RESEARCH SERVICES

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Near Sainik, School, Bhubaneswar, Odisha - 751017



TC-6270

AMBIENT AIR TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Banharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS250926/AA135	Date of Sample Receiving	27.09.2025
Sample Description	Ambient Air Quality	Date of Testing	27.09.2025-30.09.2025
Date of Sampling	26.09.2025	Date of Reporting	03.10.2025
Location	OPGC-II Ware House Buildings	Test Report No./ULR	TC627025000000746F

ANALYSIS RESULT

Sl. No.	Name of the Parameter	Unit	Limit	Analysis Method	Result
1	Particulate Matter (PM ₁₀)	µg/m ³	100	IS 5182 (Part 23) :2006	43.2
2	Particulate Matter (PM _{2.5})	µg/m ³	60	IS 5182 (Part 24) :2019	37.4
3	Sulphur dioxide (SO ₂)	µg/m ³	80	IS 5182 (Part 2) :2001	7.6
4	Nitrogen dioxide (NO _x)	µg/m ³	80	IS 5182 (Part 6) :2006	13.2
5	Ozone (O ₃)	µg/m ³	180	IS 5182 (Part 9) :1974	BDL
6	Lead (Pb)	µg/m ³	1	IS 5182 (Part 22) :2004	BDL
7	Carbon Monoxide	mg/m ³	2	IS 5182 (Part 10) :1999	0.38

*****End of Report*****

Report Prepared by
Name: Bhagyashree Pradhan
Designation: Chemical Analyst

Bhagyashree Pradhan
03-10-25



Approved by
Name: Harmohan Das
Designation: Quality Manager

Harmohan Das
03/10/25

Note:

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TC-6270

AMBIENT AIR TEST REPORT

Format No-AGRS/FM/45

Customer Name:	Odisha Power Generation Corporation Limited.		
Customer Address	IB Thermal Power Station Baharpali, Jharsuguda, Odisha- 768234.		
Ref. No.	PO No.: 2500004475		
Lab Sample Id	AGRS250926/AA134	Date of Sample Receiving	27.09.2025
Sample Description	Ambient Air Quality	Date of Testing	27.09.2025-29.09.2025
Date of Sampling	26.09.2025	Date of Reporting	03.10.2025
Location	Telenpali Village, OPGC	Test Report No./ULR	TC627025000000736F

ANALYSIS RESULT

Sl. No.	Name of the Parameter	Unit	Limit	Analysis Method	Result
1	Particulate Matter (PM ₁₀)	µg/m ³	100	IS 5182 (Part 23) :2006	46.2
2	Particulate Matter (PM _{2.5})	µg/m ³	60	IS 5182 (Part 24) :2019	35.9
3	Sulphur dioxide (SO ₂)	µg/m ³	80	IS 5182 (Part 2) :2001	6.5
4	Nitrogen dioxide (NO _x)	µg/m ³	80	IS 5182 (Part 6) :2006	12.7
5	Ozone (O ₃)	µg/ m ³	180	IS 5182 (Part 9) :1974	BDL
6	Lead (Pb)	µg/ m ³	1	IS 5182 (Part 22) :2004	BDL
7	Carbon Monoxide	mg/ m ³	2	IS 5182 (Part 10) :1999	0.35
8	Mercury (Hg)	µg/ m ³	--	IS 12041 :1987	BDL

*****End of Report*****

Report Prepared by *Bhagyashree Pradhan*
Name: Bhagyashree Pradhan
Designation: Chemical Analyst



Approved by *Harmohan Das*
Name: Harmohan Das
Designation: Quality Manager

Note:

- The results relate only to the item(s) test.
- This test report shall not be reproduced except in full, without the permission of AGRS.
- The reserved of sample(s) shall be retained for 07 days.
- This test result shall not be used in any advertising media or evidence in the court of Law without prior written consent of the laboratory.



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ନୌଚିତ୍ର

ନୌଚିତ୍ର

ଦ୍ୱାରା ନିମ୍ନଲିଖିତ ବ୍ୟକ୍ତିମାନଙ୍କ ଅବଗତ ନିମନ୍ତେ ଜଣାଇ ଦିଆଯାଉଛି ଓଡ଼ିଶା ପାଖରେ କେନ୍ଦ୍ରୀୟ ସରକାରଙ୍କ ନିର୍ଦ୍ଦେଶ (ପ୍ରତିନିଧି) ପାଖରେ ଓଡ଼ିଶା ପ୍ରଦେଶର ସରକାରଙ୍କ ଦ୍ୱାରା ନିମ୍ନଲିଖିତ ନିମନ୍ତେ ସେମାନଙ୍କର ଜମି ୧୯୮୫ ୨୦ ମସିହାରେ ଅଧିକାର କରାଯାଇ ଅଛାଯାଏ ।

1. ନିମ୍ନଲିଖିତ ବ୍ୟକ୍ତିମାନଙ୍କୁ ଏହି ନୌଚିତ୍ର/ନିଆର ମାଧ୍ୟମରେ ଜଣାଇ ଦିଆଯାଉଛି ଯେ, ଉପରୋକ୍ତ ଜମି ଅଧିକାର କରାଯାଇ ନାହିଁ ବା ସେମାନଙ୍କର ନୌଚିତ୍ର ଦାବି ଆପତ୍ତି ଥାଏ, ତେବେ ସେମାନଙ୍କର ଆପତ୍ତି ତା. ୨୬.୦୮.୨୦୧୦ ରୁ ଆରମ୍ଭ ହେବ । ଏହି ନୌଚିତ୍ର ପ୍ରକାଶନ ପରେ ୩୦ ଦିନ ମଧ୍ୟରେ ଆପତ୍ତି ଦିଆଯାଇ ପାରେ । ଏହା ପରେ କୌଣସି ଆପତ୍ତି ଗ୍ରହଣ କରାଯାଇ ନାହିଁ ।

ନାମ ଓ ପିତା ନାମ/ପ୍ରାମ ନାମ
କଳିଦାସ ଉପାଧ୍ୟାୟ, ପି : ଶ୍ରୀ ଉପାଧ୍ୟାୟ, ବାଲିଗାଡ଼
କଳିଦାସ ଉପାଧ୍ୟାୟ, ବନହରପାଳି
ଧ୍ୟୋତେୟ ରଥ, ପି : ବିଶ୍ୱନାଥ ରଥ, ବନହରପାଳି
ରାଜିନୀକାନ୍ତ ରଥ, ପି : ବିଶ୍ୱନାଥ ରଥ, ବନହରପାଳି
ପ୍ରକାଶ ଝାଞ୍ଜର, ପି : ଅଜିତ ରଥ, ବନହରପାଳି
ଜୟମଙ୍ଗଳ ବାରିକ, ପି : ପଦ୍ମ ବାରିକ, ବାଲିଗାଡ଼
ସାରଳା ବେରିଆ, ପି : ଗୋବିନ୍ଦଚନ୍ଦ୍ର ନାୟକ, ବାଲିଗାଡ଼
ହରି ବିହାରୀ, ପି : ଗୋବିନ୍ଦଚନ୍ଦ୍ର ନାୟକ, ବାଲିଗାଡ଼
ଗଣେଶ୍ୱର ପଧାନ, ପି : ବିହାରୀ ପଧାନ, ବାଲିଗାଡ଼
ରଞ୍ଜନ ପଧାନ, ପି : ଉତ୍ତମ ପଧାନ, ବାଲିଗାଡ଼
ମଧୁସୂଦନ ଶତନାମି, ପି : ଉତ୍ତମ ଶତନାମି, ବାଲିଗାଡ଼
ଚନ୍ଦ୍ରଶେଖର ରୋହିତାସ, ପି : ମଧୁ ରୋହିତାସ, ବାଲିଗାଡ଼
ପରଦେଶୀ ବଲଦଳିଆ, ପି : ରୋହିତାସ ବଲଦଳିଆ, ବାଲିଗାଡ଼
ସତ୍ୟନାରାୟଣ ନାୟକ, ପି : ଉତ୍ତମ ନାୟକ, ବାଲିଗାଡ଼
ଯୋଗାବତୀ ନାୟକ, ସ୍ତ୍ରୀ : ଉତ୍ତମ ନାୟକ, ବାଲିଗାଡ଼
ତ୍ରିଲୋଚନ ଉପାଧ୍ୟାୟ, ପି : ଶ୍ୟାମା ଉପାଧ୍ୟାୟ, ବାଲିଗାଡ଼
ବନ ଉପାଧ୍ୟାୟ, ପି : ଶ୍ୟାମା ଉପାଧ୍ୟାୟ, ବାଲିଗାଡ଼
ମାଧନ ଉପାଧ୍ୟାୟ, ପି : ଶ୍ୟାମା ଉପାଧ୍ୟାୟ, ବାଲିଗାଡ଼
ମମତା ବେରିଆ, ପି : ଚନ୍ଦ୍ର ବେରିଆ, ବାଲିଗାଡ଼
ନିତ୍ୟାଣୀ ବେରିଆ, ପି : ଚନ୍ଦ୍ର ବେରିଆ, ବାଲିଗାଡ଼
ପିତା ସାଧୁ, ପି : ଶ୍ରୀମତୀ ସାଧୁ, ବାଲିଗାଡ଼
ଦେବ ସାଧୁ, ପି : ଶ୍ରୀମତୀ ସାଧୁ, ବାଲିଗାଡ଼
ପାଣିପାଣି ସାଧୁ, ପି : ପୂର୍ଣ୍ଣ ସାଧୁ, ବାଲିଗାଡ଼
ଉତ୍ତମ ସାଧୁ, ପି : ଶ୍ରୀମତୀ ସାଧୁ, ବନହରପାଳି
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ଶ୍ରୀମତୀ ସୁଧାମା ଦେବୀ, ପି : ଶ୍ରୀମତୀ ଦେବୀ, ବନହରପାଳି
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ଶ୍ରୀମତୀ ସୁଧାମା ଦେବୀ, ପି : ଶ୍ରୀମତୀ ଦେବୀ, ବାଲିଗାଡ଼
ଶ୍ରୀମତୀ ସୁଧାମା ଦେବୀ, ପି : ଶ୍ରୀମତୀ ଦେବୀ, ବାଲିଗାଡ଼

ଦାଖଲ କରିବା ପାଇଁ ନିମ୍ନଲିଖିତ ନିମନ୍ତେ ସେମାନଙ୍କର ନୌଚିତ୍ର ଦାବି ଆପତ୍ତି ଥାଏ, ତେବେ ସେମାନଙ୍କର ଆପତ୍ତି ତା. ୨୬.୦୮.୨୦୧୦ ରୁ ଆରମ୍ଭ ହେବ । ଏହି ନୌଚିତ୍ର ପ୍ରକାଶନ ପରେ ୩୦ ଦିନ ମଧ୍ୟରେ ଆପତ୍ତି ଦିଆଯାଇ ପାରେ । ଏହା ପରେ କୌଣସି ଆପତ୍ତି ଗ୍ରହଣ କରାଯାଇ ନାହିଁ ।

୧. ଅଧିକାରୀଙ୍କ ନାମ ଓ ପିତା ନାମ ଉପରେ ଉଲ୍ଲେଖ କରାଯାଇଛି । ଏହି ନୌଚିତ୍ର ପ୍ରକାଶନ ପରେ ୩୦ ଦିନ ମଧ୍ୟରେ ଆପତ୍ତି ଦିଆଯାଇ ପାରେ । ଏହା ପରେ କୌଣସି ଆପତ୍ତି ଗ୍ରହଣ କରାଯାଇ ନାହିଁ ।

Sl. No	Name of the work
1	2
1	Reconstruction & Renovation of Danra Market Yard
2	Construction of 250' MT Godown at Danra Market Yard

The intending tenderers Market Committee, Deogarh "Schedule of works" in sha 28.08.2010 during office hour & opening of tender the sam

The tender paper will be Dist- Deogarh up to 04.01 and will be opened on 30.1 agents if present in the office or by courier service. The delivery of tender document registered license. VAT clea to be deposited duly pledge payable at Deogarh along EMD will be entertained. T separately mentioning "TE mentioning the name of the for other matter are allowed The authority reserves the

OFFICE OF THE DISTRICT TENDER OFFICER

Sealed tenders in conformity form is invited by the Colli contractors of class as tabled R.P./Minor Irrigation/ N.H.C Dated 30.08.2010 in the of (SSA), Nuapada. The bid C.P.W.D. in equivalent rank have to be registered under

Sl. No.	Name of the work
Nuapada Block	
1.	Construction of KGBV, 2 Hostel Building at Parkod Nodal UPS
2.	Bid document consisting conditions of contract ar District Project Co-ordi hours every day except payment of the cost of th drawn in any nationalized the office happens to be same will be done on the
3.	The sale of bid document and tender will be receive
4.	Bid documents can be do (www.nuapada.nic.in) If website will have to pay th of demand draft/Banker's in favour of DPC, SSA, N any portion of downloaded in the office of the unders
5.	Bid documents requested: of an extra amount of Rs.1 bank draft/Banker's cheq favour of DPC, SSA, Nua any in delivery of the docu
6.	Bid document in sealed e: 3 P.M. on Dt. 30.08.2010. date and time will not be e: receipt or loss of tender d
7.	Bid must be accompanied Banker's Cheque drawn o DPC, SSA, Nuapada with
8.	Bidders are to submit the and VAT Clearance Certifi for selection

Other than Multiyear CSR Projects for FY 2025-26				Annexure-A
SL No	Thematic Area	Proposal for CSR activities in details	Village Covered	Project Amount (In Rs. lakhs)
1	Promotion of Education	Education Support Programme in Periphery Schools and Colleges	Periphery villages/ Hamlets	Six GPs 15.00
2	Promotion of Education	Scholarship program for Meritorious students of Peripher village	Periphery villages/ Hamlets	Six GPs 13.00
3	Promotion of Education	Learning Enhancement Remedial Program, Career Counselling, advanced coaching to students,	Periphery villages/ Hamlets	Six GPs 50.00
4	Promotion of Education	Girl child empowerment program	Periphery villages/ Hamlets	Six GPs 25.00
5	Promotion of Education	Smart Class for periphery schools	Periphery villages/ Hamlets	Six GPs 40.00
6	Promotion of Education	Hiring of School Van for students of Sansaratikira village	Sansaratikira	Kumarbandh 4.00
7	Promotion of Education	Supply and Installation of playing equipment in periphery villages	Periphery villages/ Hamlets	Six GPs 1.30
8	Promotion of Education	Provision of school kits, test papers, desk & bench, water purifier/Cooler, furniture, bicycle for periphery schools/students	Telenpali	Banharpali 10.00
9	Preventive Health	Operation of Mobile health services and health camp	Periphery villages/ Hamlets	Six GPs + MGR Line 50.00
10	Preventive Health	Eye check-up camp for villages & schools	Periphery villages/ Hamlets	Six GPs 5.00
11	Preventive Health	Combating Alcohol Programme in periphery villages	Telenpali & Kushraioi	All village 6.00
12	Preventive Health	Procurement of medical equipment for patients of periphery villages	Periphery villages/ Hamlets	Six GPs + MGR Line 7.93
13	Preventive Health	Larvacide Spray and Anti-Mosquito fogging program for periphery village	Periphery villages/ Hamlets	Six GPs 15.00

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14	Preventive Health	Sanitary Napkin, Vending Machine, and Incinerator facilitation for adolescent Schools and college Girls in Peripheral Educational Institutions.	Periphery villages/ Hamlets	Six GPs	14.30
15	Preventive Health	Malnutrition Awareness Programme in periphery villages of ITPS	Periphery villages/ Hamlets	Six GPs	6.00
16	Preventive Health	Nikshya Mitra (TB Eradication Program)	Periphery villages/ Hamlets	Six GPs	4.00
17	Development of Community Infrastructure	AMC of LED street light and painting & replacement of poles installed by OPGC, Payment of electricity bill of street light & water supply connection	Periphery villages/ Hamlets	Six GPs	20.00
18	Provision of safe drinking water	AMC of pipeline drinking water supply and Repair and maintenance of WASH project, installation of extra water point	Periphery villages/ Hamlets	Six GPs	20.00
19	Provision of safe drinking water	Supply of water through Tankers for three and half summer months	Periphery villages/ Hamlets	Six GPs	47.00
20	Provision of safe drinking water	Supply of drinking water beyond summer season	Periphery villages/ Hamlets	Six GPs	10.00
21	Livelihood Enhancement and Skill development	Programme for Skills Development of youth	Periphery villages/ Hamlets	Six GPs	26.00
22	Livelihood Enhancement and Skill development	Livelihood Training on Mushroom Cultivation for Women SHGs of ITPS Periphery	Periphery villages/ Hamlets	Six GPs	15.93
23	Environment	Plantation and sapling distribution	Periphery villages/ Hamlets	Six GPs	10.00
24	Promotion of Rural Sports	Purchase of Sports material, organising sports training and Tournament	Periphery villages/ Hamlets	Six GPs	15.00
A		Sub Total			430.46

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Multi-year CSR projects for FY 2025-26		Annexure-A						
SI No	Thematic Area	Proposal for CSR activities in details	Village Covered	Gram Panchayat	Project Amount (In Rs. lakhs)	Phasing for FY 25-26	Phasing for FY 26-27	Phasing for FY 27-28
1	Promotion of education	Development of school infrastructure	Periphery villages/ Hamlets	Six GPs	110.00	35.00	35.00	40.00
2	Development of Community Infrastructure	Rural Electrification project at Baragad village	Baragad	Telenpali	30.00	10.00	10.00	10.00
3	Development of Community Infrastructure	Community Centre for Senior Citizens at Banharpali village with indoor-sports items, furniture & allied facilities	Telenpali	Telenpali	18.00	6.00	6.00	6.00
4	Development of Community Infrastructure	Construction of Road and Drain at Banharpali	Telenpali	Banharpali	60.00	20.00	20.00	20.00
5	Development of Community Infrastructure	Construction of Public amenities/structures at near Puruna Adhapara Mandir for tourism	Puruna Adhapara	Telenpali	20.00	6.00	6.00	8.00
6	Development of Community Infrastructure	Construction of concrete road from Khamardihi Hanuman temple to khapsmunda	Khamardihi	Dalgaon	20.00	5.00	5.00	10.00
7	Development of Community Infrastructure	Construction of CC road from Kamalu patra house to Shiv temple Alnajharan under Remenda GP	Alnajharan	Remenda	15.00	5.00	5.00	5.00
8	Development of Community Infrastructure	Cleaning of pond & beautification of ponds, construction of bathing step	Periphery villages/ Hamlets	Six GPs	60.00	20.00	20.00	20.00
9	Development of Community Infrastructure	Renovation of Khandasa kata.	Kushraloi	Kushraloi	7.58	7.58		
10	Development of Community Infrastructure	Construction of road in periphery villages	Periphery villages/ Hamlets	Six GPs	500.00	150.00	150.00	200.00
11	Development of Community Infrastructure	Dining hall at Adhapara near Kalyan Mandap	Kushraloi	Adhapara	30.00	5.00	10.00	15.00
12	Development of Community Infrastructure	Repair of Sansaratrika water supply system	Sansaratrika	Rampela	3.04	3.04		
13	Provision of Safe drinking Water	Rerouting of pipeline near pumphouse of ITPS	Pumphouse	Telenpali	41.00	10.00	10.00	20.00
14	Provision of Safe drinking Water	Rerouting of water supply pipeline from Pumphouse to Temparpada	Telenpali, Pumphousepada	Kumarbandh/ Telenpali	60.00	10.00	15.00	15.00
15	Provision of Safe drinking Water	Laying of drinking water pipeline to Bargard village	Bargard	Kushraloi	10.00	5.00	5.00	5.00

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16	Development of Community Infrastructure	Shifting of street lights from Telapalli to Rengali	Telapalli, Pumphousepada	Kumarbandh/T elapalli	10.00	5.00	5.00	
B		Sub-total			994.62	302.62	302.60	369.00
C	Miscellaneous CSR Projects	Both Multi-year & non-multi-year Misc. projects purely on need basis with the approval of Competent Authority	Periphery villages/ Hamlets	Six GPs	100.00	100.00		
		Sub-total			100.00	100.00		
D	Administrative overheads	Utilisation details (Physical Monitoring of Projects & other miscellaneous expenses, Baseline survey, engagement social media agency, Capacity Building of Team and administrative Overheads, documentation of CSR program short film, photography & videography, Branding of CSR activity)	Periphery villages/ Hamlets		30.00			
		Sub-total			30.00			
		Grand Total (A+B+C)			1555.08			

Category of Projects	Nos	Amount (in Rs. Lakh)
Other than Multiyear CSR Projects	24	430.46
Multi-year CSR projects	16	994.62
Miscellaneous CSR Projects		100.00
Administrative overheads		30.00
Total	40	1555.08

[Signature]
Head (AR & IR)

[Signature]
DGM (Finance)

[Signature]
DGM (Contract)

**ACTION PLAN FOR IDENTIFICATION OF LOCAL EMPLOYABLE YOUTH FOR TRAINING
IN SKILLS RELEVANT TO PHASE-III EXPANSION PROJECT OF OPGC POWER PLANT**

1. Objective:

Identify local youth who are employable and interested, and provide them skill development training aligned to the specific needs of the coal-fired power plant project to facilitate their employment initially in the construction phase and later in the regular operation phase of the plant.

2. Identification of Local Youth:

- Engage a professional agency or in-house team to carry out a survey to identify and create a database of local employable youth aged 18-35 (or target demographic) in the target peripheral villages of the project (IB Thermal Power Station) located at Banharpali in the District of Jharsuguda, Odisha and then carry out a skill gap analysis to identify their specific training needs to make them employable in the project.
- Conduct outreach programs, information sessions, and awareness campaigns at community level and local schools to inform the identified youth about their skill gap and training needs to become employable. This is an exercise to make them mentally ready for the training.
- Through this agency, select candidates based on interest, basic educational qualifications, and physical fitness for specific training programme to enhance their skill level.

3. Skill Training Program Development:

- Assess the skill requirements for construction and operation phases (e.g., welding, electrical work, machinery operation, safety protocols, environmental management).
- Design an 8 to 18-week training curriculum that may include vocational training, certification courses (such as NCCER construction certification), on-the-job training, and soft skills like work readiness and safety practices.
- Partner with reputed vocational training institutes or organizations (such as Local ITIs, Polytechnic & other skill training institutes) to deliver training.

4. Support Services:

- Provide support such as transportation, health and safety facilities, counseling, and career guidance during training.
- Arrange for mentoring or peer support groups.

5. Training Implementation:

- Provide paid training on courses/skills relevant to get employed in construction and operational phase of the project through the nearby located ITIs, Polytechnic institutes and/or other skill training institutes.
- After passing out of training institute, facilitate paid apprenticeship in the plant itself to get hands-on training.

6. Employment Facilitation:

- Devise a plan of action to absorb the trainees in the relevant jobs available in the project/plant through various contractors/agencies.
- Coordinate with project contractors and operation managers to prioritize employment of trained local youth.
- Include job placement services and apprenticeship opportunities with onsite experience.
- Follow up with employed youth to ensure retention and career development.

7. Monitoring and Reporting:

- Maintain records of training, placement, and employment status.
- Prepare periodic reports on the action plan's progress and outcomes to project stakeholders and local authorities.
- Adjust the action plan based on feedback and changing project needs.

8. Community Engagement and Inclusivity:

- Ensure participation of marginalized groups including women and economically backward youth.
- Respect local customs and address any special tribal or minority community needs.
- Link with Corporate Social Responsibility (CSR) activities for sustainable community development.

Detailed Corporate Environment Responsibility (CER) plan as per OM No. 22-65/2017-IA.III dated 30.09.2020 including an activity-wise break-up of financial commitment based on need-based assessment studies and public hearing outcomes.

Core Requirements and Framework

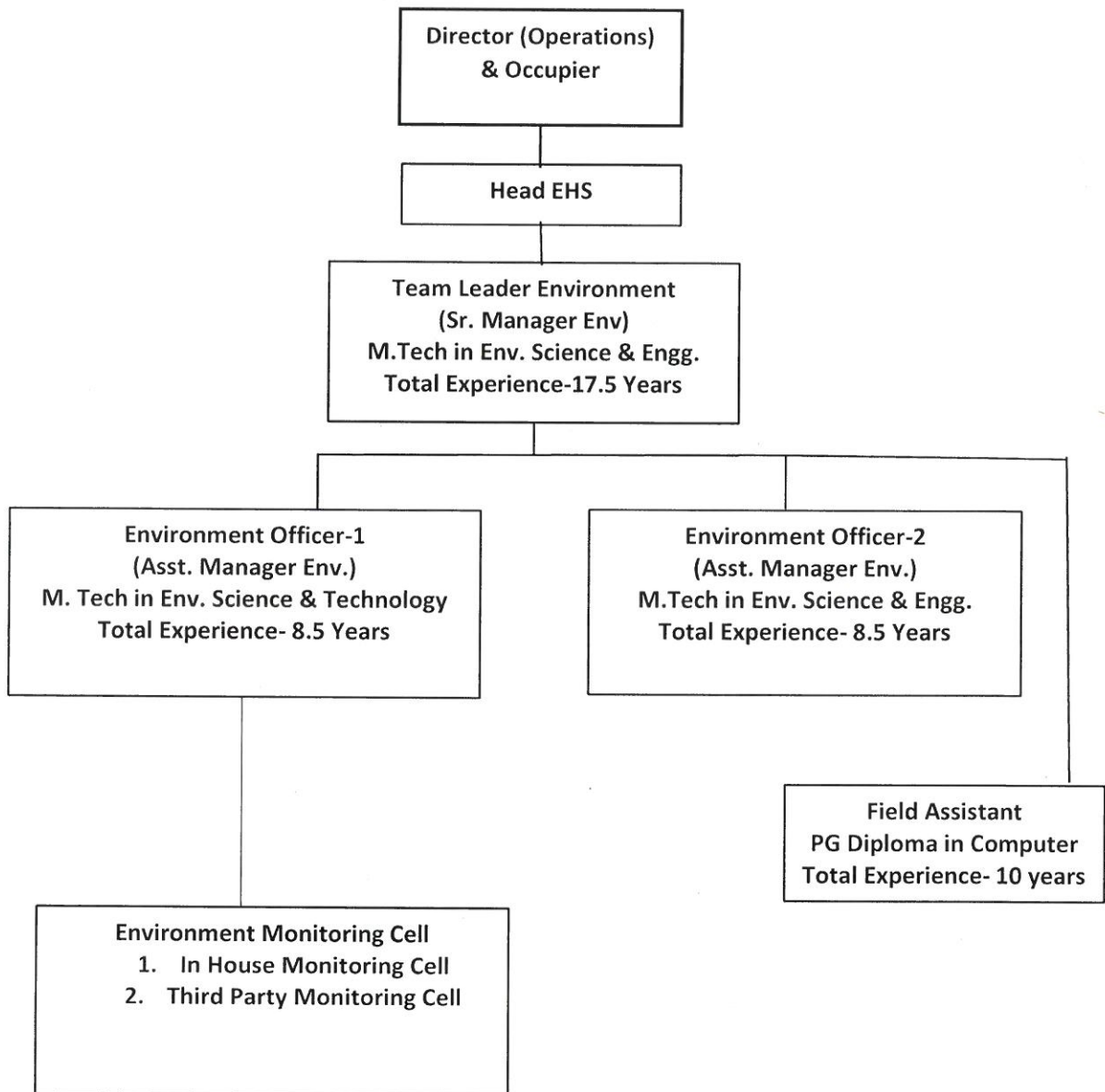
- **Identify CER Activities:** Selection of CER activities is guided by:
 - Need-based assessment studies
 - Outcomes/issues raised during the Public Hearing
 - Opportunities for sustainable income generation, preferably building upon the traditional skills of the project-affected population

- **Detailed Financial Commitment:** Each activity must have an allocated budget and a timeline for implementation

- **Integration with EMP:** Commitments must be reflected in the Environment Management Plan (EMP) and must include monitoring and social audit mechanisms.

- **Consistency with Government Schemes:** Where possible, link with ongoing Government welfare schemes for synergistic impact.

STRUCTURE OF ENVIRONMENT DEPARTMENT



ODISHA POWER GENERATION CORPORATION LTD.

(A Government Company of the State of Odisha)
CIN: U40104OR1984SG001429

Ib Thermal Power Station

Banharpali, Dist.: Jharsuguda, Odisha - 768 234, India
Plant Manager : (+916645) 289266, Fax: (+916645) 222-230
Factory Manager : (+916645) 222224, Fax: (+916645) 222-230



Letter No. ITPS/4301/WE
September 22, 2025

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

Sub: **Environmental Statement for ITPS (2x210MW & 2x660 MW) for the period from April 2024 to March 2025.**

Sir,

Enclosed please find herewith the annual Environmental Statement in (Form-V) for Ib Thermal Power Station (2x210MW & 2x660 MW), Banharpali, Jharsuguda for the period from 1st April 2024 to 31st March 2025 for kind perusal.

Thanking you

Sincerely yours,


Anjana Ranjan Dash
Director (Operations) & Occupier

Encl: Environmental Statement

Copy to-Regional Officer, State Pollution Control Board, Plot No. 370/5971, At - Babubagicha (Cox Colony),
St. Marry Hospital Road, Post - Industrial Estate, Jharsuguda for kind information

ENVIRONMENTAL STATEMENT

Odisha Power Generation Corporation Ltd
Ib Thermal Power Station

Banharpali, Jharsuguda

(2 x 210 MW & 2x660 MW)

PERIOD FROM 1st APRIL 2024 TO 31st MARCH 2025

Parthasarathi K. Das



(FORM - V)
(See Rule 14)

Environmental Statement Report for the Financial Year ending the 31st March, 2025.

PART - A

- i. Name and address of the Owner/Occupier of the Industry : **Mr. Anjana Ranjan Dash**
Odisha Power Generation Corp. Ltd.
1b Thermal Power Station
Banharpali, Jharsuguda
Pin Code- 768234
Site Office-Ph.06645-222220, Fax. 222230
- ii. Production Capacity : 1740 MW (2X210 MW & 2x660MW))
- iii. Year of Establishment : Unit#1-21.12.1994
: Unit#2-20.06.1996
: Unit#3-03.07.2019
: Unit#4-21.08.2019
- iv. Date of last Environment Statement submitted : 20.09.2024
- v. Industry category : Thermal Power Plant

Environment Statement

Anjana Ranjan Dash

PART – B

(Water and Raw Material Consumption)

(All values indicate Annual consumption) in m³/day

Sl.	Description	2023-2024	2024-2025
(i)	Gross Energy Generation (MU/Year):	11799.666	12769.092
(ii)	Total Water consumption (m3/day):	79570	84205
(iii)	Ash disposal make up, Process NEBD:	3133	4043
(iv)	Cooling, Spraying, Boiler Feed:	18730436	19774395
(v)	Domestic*: (Excluding Township)	361.353	393
(vi)	Process, EBD	7040	7431

Sl No	Name of the product	Process Water Consumption per Unit of Product Output	
		2023-24	2024-25
01	Electricity	2.37 KI/MWH	2.41 KI/MWH

NB: The Sp. Water consumption was higher than previous due to lesser generation.

Name of Raw Material	Name of the product	Consumption of Raw Material unit of output			
		2023-24		2024-25	
Coal	Electricity	Total Consumption	8755602	Total Consumption	9053066
		Specific Consumption	0.742Kg/KWH	Specific Consumption	0.708 Kg/KWH
Start-up Fuel Oil (LDO)	Electricity	Total Consumption	2772.872 KL	Total Consumption	2384.172 KL
		Specific Consumption	0.234 ml/KWH	Specific Consumption	0.186 ml/KWH

Amgaisanatha R

PART – C
Pollution discharged to Environment and Pollution Level

PERIOD- April 2024 TO March 2025

STACK EMISSION								
PARAMETER	NORM	STACK 1			NORM	STACK 2		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM (mg/Nm ³)	100	91	74	85	100	88	65	79
SO ₂ (mg/Nm ³)	600	1316	1045	1199	600	1335	1053	1198
NO _x (mg/Nm ³)	600	303	308	332	600	338	267	303
PARAMETER	NORM	STACK 3			NORM	STACK 4		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM (mg/Nm ³)	50	39	29	35	50	43	33	35
SO ₂ (mg/Nm ³)	200	1580	1380	1457	200	1616	1209	1160
NO _x (mg/Nm ³)	450	348	220	264	450	330	235	239
AMBIENT AIR QUALITY								
PARAMETER	NORM	INDUSTRIAL			NORM	RESIDENTIAL		
		MAX.	MIN.	AVE.		MAX.	MIN.	AVE.
PM ₁₀ (ug/m ³)	100	94	39	70	100	89	20	66
PM _{2.5} (ug/m ³)	60	56	17	37	60	52	10	35
SO ₂ (ug/m ³)	80	19	9	12	80	13	8	9
NO _x (ug/m ³)	80	31	15	23	80	26	10	18
STP WATER QUALITY					AMBIENT NOISE in dB(A)			
PARAMETER	NORM	MAX	MIN	AVE.	INDUSTRIAL		RESIDENTIAL	
					MAX.	MIN.	MAX.	MIN.
pH	6.5 – 9.0	7.11	6.51	6.92				
TSS, mg/ltr	100	51	6.9	20.65				
BOD(3 days at 27°C), mg/ltr	30	21	7.9	15.4	DAY TIME			
					NORM			
					75		55	
					73	67	48	39
Fecal coliform	<1000	106	87	85.52	NIGHT TIME			
					NORM			
					70		45	
					69	64	42	36

OPGC has installed continuous emission monitoring system for both the stacks, four continuous ambient air quality monitoring stations and one continuous effluent monitoring station for round the clock monitoring and control of emission/pollution parameters. These stations are connected to SPCB & CPCB servers through real time data acquisition and transmission facility. The plant has achieved zero effluent discharge from December'18 onwards and till December'18 only 1 % effluent had been discharged after meeting the norms.

Pankaj Kumar R. S.

**PART – D
HAZARDOUS WASTES**

(As specified under Hazardous wastes/management & Handling Rules, 2016)

A. From Process:

Hazardous Waste Types	2023-24				2024-25			
	Opening stock	Generation	Sold/Disposed	Balance	Opening stock	Generation	Sold/Disposed/in house utilization	Balance
Used oil or Spent oil a. Used Lub. Oil : KL b. Used Grease : MT c. Used Transformer Oil : KL	196.29 KL a. 99.355 KL b. 96.56 KL c. 0.375 KL	41.37 KL a. 37.38 KL b. 3.99 KL c. Nil	23 KL a. 23 KL b. Nil c. Nil	214.66 KL	214.66 KL	62.910 KL	41.11 KL	336.460 KL
Waste or Residue containing oil*	7.6 MT	2.0 MT (oily cotton waste)	Nil	9.6 MT Note- Stored securely inside PVC containers after evaporation of oil	9.6 MT Note- Stored securely inside PVC containers after evaporation of oil	2.0 MT	11.6 MT (Combustion in Boiler)	Nil
Oily sludge during cleaning: KL	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Spent Resin, MT	Nil	Nil	Nil	7.6 MT Note- Stored in impervious Pit	7.6 MT Note- Stored in impervious Pit	Nil	0.700 MT (Mixed with coal and used for combustion)	6.900 MT Note- Stored in impervious Pit
Discarded Container a. oil drums (Nos) Empty Chemical Jar, Nos b. CW chemical	422	523	426 (20 nos. used in house)	519	519	1697 Nos.	764 Nos (5.944 MT) 115 Nos (1.840 MT) Note- Oil drums used for storage 260 Nos (0.520 MT) Ammonia jerkins 169 Nos (2.704 MT) Note- Oil drums Disposed along with Used Oil 220 Nos (0.880 MT) Note- Chemical Jerkins disposed back to original supplier on buy back policy	1452 Nos (20.374 MT)

Pongasara G R A

B. From Pollution Control Facilities: No generation

PART – E
SOLID WASTES

A. Ash:

Solid Wastes (Ash):	Total Quantity (MT)	
	2023-24	2024-25
From Process	715925MT (Bottom Ash)	763408 MT (Bottom Ash)
From Pollution Control Facilities	2863704 MT (Fly Ash)	3053580 MT (Fly Ash)
Quantity Utilized	874309 MT	650676 MT
Disposed in Ash Pond	2705320 MT	3113930 MT

Reasons for variation from the target

1. Since the plant is situated in a remote location (pit head power plant located in rural area) there is very limited scope of ash utilization in brick manufacturing. More ever utilization in this particular area cannot exceed more than 2% to 3%.
2. Big Stone quarry or low lands are not available in the locality.
3. Export of ash is not feasible since the site is located at a distance of 500 Km from the nearest port. Transportation from site to nearest port through rail or any other means is not feasible.
4. Major road construction activities are taking place near Jharsuguda (Expansion of Sambalpur Rourkela Sate Highway No-10 & Expansion of Sambalpur National Highway No-42). The ash demands for these activities are met by other thermal power plants, close to the road construction areas. However, we have supplied around 8830 MT of ash in the last financial year for construction of road.
5. No scope available in major ash utilization area i.e. Cement Plant use for production of PPC cement. Only one cement plant is available in the vicinity i.e. M/s Ultratech Cement Ltd. M/s Ultratech off takes entire quantity of ash for cement manufacturing from its sister concern i.e. from M/s Aditya Aluminium (Lapanga).
6. Considering OPGC plant's location (Pit Head), mine void back filling of ash is the only means of utilization by which OPGC can achieve 100% ash utilization. The steps so far are as follows.
 - i. There was progress on mine void allotment in the year 2006. With the support from Regional Office, MoEF and SPCB, MCL has consented to allot Lilari mine void to OPGC. Subsequently, in July 2007, MCL accorded consent for taking up EIA & Feasibility Study for back filling in the void based on which OPGC engaged CIMFR to conduct the studies in October 2007. During the course of the EIA study, the consent given to OPGC was withdrawn by MCL unilaterally vide their letter No MCL-3185/13.02.2008 stating "the life of Lilari Mine is extended with ten more years". Thereafter, OPGC has been pursuing MCL time and again

Partly in area (5-1) after

involving regulatory as well as Govt. to reconsider the withdrawal or consider allotting any other mine void near to OPGC site but there has been no progress.

- ii. State Pollution Control Board, Odisha made a proceeding on 05.06.10 for backfilling of OPGC ash in BOCM Mine void of MCL as an alternative solution against allotment of Lilari Mine void but no initiative has been taken so far from MCL side.
- iii. MCL has also been directed repeatedly by OPGC Chairman & Principal Secretary, Energy, Govt. of Odisha, managing Director and Director (Operation) but no positive response has so far been received from MCL.
- iv. In a meeting held on 24.01.2011 with Principal secretary Energy, Govt. of Odisha, CMD, MCL has given consent to give principal approval for back filling BOCM mine void but the same has not been done, so far.
- v. In response to the letter of Director (Operation), OPGC, dtd.24.08.2013 on the subject, Director (Tech. P&P), MCL negated the request on the ground of BOCM expansion towards dip slide and no scope to back fill ash in running mine even though OPGC proposed for a partition bund to separate the void space from active mine for ash back filling.
- vi. In a high-level meeting held on 13.12.2013 under the Chairmanship of Chief Secretary, GoO, directions for allotment of BOCM mine void to OPGCL were issued to MCL on 03.04.2014 by Dept. of Environment & Forest, GoO. The said directions were for taking expeditious steps on this front. However, there has not been any progress as yet.
- vii. In a letter dated 10.08.2020 OPGC had again requested Director Technical for allotment of BOCM mine void, however the request was turned down stating various technical causes.
- viii. In a letter dated 14.06.2021 OPGC had again requested Director Technical for allotment of BOCM mine void, however the request was turned down vide MCL letter No253H, dated 07.08.2021 stating the reason of excavation of bottom seam and integration of Lakhanpur, Belpahar & Lilari mines.

**However, OPGC is still working on high priority to pursue MCL, involving Government & other agency to get newly allotted nearest mine void to fulfill this important regulatory obligation.*

Efforts made by OPGCL to Maximise Utilisation of Fly-Ash:

1. OPGCL has entered into an agreement with Dalmia cement, Rajgangpur and Ambuja cement, PAN India for supply of 1MMT fly ash per year to each cement plants (the transportation is being done through dedicated BTAP rakes).
2. OPGC has served notice to MCL and OCPL referring fly ash notification 31 December 2021 for OB mix, concurrent filling and back filling of mines with coal ash.
3. OPGC is in process of procurement of BTAP type wagons and construction of dry ash silos at OCPL (2 silos of 1500MT capacity each) end. This will help OPGC to avoid road transportation of ash particularly narrow village roads. After pneumatic unloading of ash into the silos at mines end, the ash will be used for back filling/OB mix or it can also be used in nearby extinct quarries, low lying areas and road projects. It is pertinent here to mention that majority of the extinct stone quarries and low lying areas are in Sundargarh district, which are in close proximity to OCPL.
4. OPGC has discovered rate contract price for different slabs up to lead distance of 300KM (aerial distance). This will help OPGC in utilization of ash at distant avenues.

Environment Statement

Parbhakar Singh

5. OPGC at present has an avenue for supplying of 30LMT of ash to different NHAI, SH, PWD road projects.

PART – F

Indicate disposal practice adopted for Hazardous as well as solid waste

A. Hazardous Wastes:

OPGC has obtained Hazardous Waste Authorization from OSPCB for Collection & Storage of Hazardous waste valid up to 31st March 2026.

Used Oil and grease are periodically collected from different location within plant & stored at designated place with concrete flooring, shed and secondary containment. The same is then transferred to a central storage area. This is being disposed to recyclers/re-processors having authorization & valid consent from SPCB & registered under CPCB.

Spent resin is temporarily stored in identified impervious pits at ITPS. It has been planned to dispose of the same in CHWTSDF. Asbestos generated from conveyer roofs as a phase out plan is disposed in underground pits within the plant premises. Discarded chemical containers are mostly returned to the Chemical suppliers against supply of fresh chemical supply.

E- Wastes are stored in designated places under concrete floor & shed. Inventorization of the same has been made & intimated to OSPCB. OPGC has signed lifetime membership agreement with M/S Ramky Enviro Engineers (RE Sustainability Ltd) for disposal of non-soluble, non-incinerable and non-recyclable hazardous wastes at Common Hazardous Wastes Treatment Storage and Disposal Facility (CHWTSDF), Jajpur.

New Batteries are procured from Battery suppliers against buy back of used/waste batteries.

B. Fly Ash and Bottom Ash

OPGC has both wet ash disposal system as well as dry ash disposal system at ITPS for handling the main solid waste i.e. fly ash & bottom ash. OPGC has 03 Ash Ponds for Unit#1&2 (2x210MW) & 02 Ash Ponds for Unit#3&4(2x660MW) i.e.

- i. Ash Pond A- 150 Acres
- ii. Ash Pond B- 242 Acres
- iii. Ash Pond C- 115.92 Acres.
- iv. Ash Pond Phase I- 125 Acres
- v. Ash Pond Phase II- 175 Acres

Ash pond B was exhausted in August 2007 and thereafter a study was conducted through IIT, Madras where it was recommended to go for another 03-meter Dry Ash Mounds on the Pond B. Based on which OPGC has constructed Ash Mounds on the Pond successfully. Reclamation certificate has been obtained from OSPCB.

Ash pond A is in partial operation and ash is evacuated from ash Pond A for utilization in low lying areas

Pankaj Kumar G. A. Oberoi

reclamation and road construction.

Ash Pond-C is operational, and ash is disposed in form of lean slurry.

Ash Pond Phase I and Phase II are operational.

Dry ash collection facility with 600 MT (Unit# 1&2) and 8100MT(Unit#3&4) capacities Storage Silo for utilization of dry fly ash by Cement Industries & ash brick/block manufacturing units is already in place. The ash collected in this Silo is from Field 2 of ESPs suitable for Cement & Brick production. Provision has been made for additional storage and collection facility (60 T/Hr with Storage facility of 120 MT) from 1st fields of ESPs. This dry ash collection facility is made for adequate dry ash availability in utilizing ash in low land reclamation and road construction.

C. Other Solid Waste of Plant and Colony (Bio-degradable)

Solid Waste of plant other than Fly Ash & Bottom Ash, like ferrous & non-ferrous scraps are collected regularly from different sites & deposited in the designated scrap yard for selling.

Kitchen waste is collected from Plant Canteen, Colony, Guest House, ITPS Market etc. and segregated as biodegradable and non-biodegradable is being disposed in an eco-friendly manner in a 1.0 Ton Capacity Bio-Gas Plant with zero effluent discharge.

Other biodegradable waste of plant & colony is regularly collected from different places & disposed on OPGC land. Domestic effluent from Plant is disposed through Septic Tanks and Soak Pits and Sewage from colony is treated in 1.0 MLD capacity Sewage Treatment Plant (STP) with zero effluent discharge. Treated Sewage is reused for watering green belt and also used in Park for horticulture purpose.

D. Bio-medical Waste

OPGC has 18-bedded Hospital at ITPS without any Operation Theatre. Bio-medical waste is mainly non-toxic in nature and the quantity is insignificant. OPGC has sign an agreement with Mediaid Marketing services, Sundargarh (facility owner for Biomedical Waste disposal). The Biomedical waste are transported through dedicated vehicle and disposed off in facility situated at Sundargarh district.

E. Plastic waste

Plastic waste is being segregated from Colony Garbage and packed in gunny bags. The gunny bags containing plastics are being stored in a designated place at township. The same is being given to plastic waste recycler. Process has been initiated to dispose the same through co-processing in cement plant of M/s ACC Limited. Formal agreement is already in place for disposal.

OPGC has declared no usage of plastic carry bags in colony and plant area. Regular campaigns are made to restrict the use of plastic carry bags in township and peripheral areas. OPGC has distributed Jute carry bags to all its employees to promote non usage of plastic carry bags.

Pondhara (B) Area

PART – G

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

- By adopting appropriate technology, operation & maintenance, monitoring practices and pollution control measures, OPGC has been successful in conserving coal, oil, water & energy through reduce /reuse/recycle.
- Through 100% Ash Water re-cycling system and maximum reuse of other liquid effluents is in process, not only control & prevention of water pollution takes place but also optimization of fresh water makeup has been taking place. Specific water consumption remains less than 3KL/MWH which indicates effective water conservation.
- Fuel oil consumption is monitored and controlled with minimum Unit light up periods and reducing number of Unit trips.
- Lubricant consumption is also monitored regularly to reduce its consumption.
- All bricks used for civil maintenance activities inside the plant are of ash bricks.
- Pond ash is being used for ash mound preparation & also for ash dyke height raising, thereby conserving soil for dyke height raising as well as increasing ash pond life.
- LED light and solar panel have led significant conservation of energy in township, as pond and street lighting

B. IMPACT OF POLLUTION CONTROL MEASURES ON COST OF PRODUCTION:

Cost of production reduces due to

1. Process optimization to operate plant with reduced emission and higher efficiency.
2. Conservation of resources used as input (Coal, Oil, Water.)
3. Waste utilization & eco-friendly and cost-effective disposal means (Solid waste and hazardous waste).

The additional investment and the above benefits balance some way by treating the pollution control and mitigation is integrated with overall efficiency of the plant and cost of the production.

PART – H

Additional investment proposal for Environmental protection abatement of pollution,

Prevention of pollution

1. Utilization of ash in low lying areas, brick plants/asbestos- 28.22Cr.
2. Tree Plantation/Green belt development- 2.47 lakh
3. Effective Ash dispersion control in Ash Pond at the time of turbulent wind flow- 30 lakh
4. Ash Disposal line replacement to reduce the risk of pipe line failure- 25 lakh
5. Hazardous waste disposal-5 Lakhs
6. Maintenance of online analysers-10 Lakhs
7. ISO 14001:2015 recertification-2.5 Lakhs

Environment Statement

Part G is oral 5% kind of

PART- I

Any other particulars for improving the quality of Environment.

- Complying with the directions and conditions of state and central pollution boards.
- Environment Management by establishing ISO 14001:2015 EMS and Global EMS standard.
- Fine tuning of ESPs of both the Units for achieving desired emission level.
- Adequate plantation and greenbelt developed to minimise air as well as noise pollution. Planted approx. 3.23 lakh trees. 34.92% greenbelt and plantation exists in and around plant and colony premises.
- Water conservation by 100% Ash water recirculation and other effluents recycle & reuse. All the plant effluent is also getting recycled back in process.
- Housekeeping has been given highest priority. Plant & Colony premises are maintained clean all the time. Roads are black turfed to control fugitive emission. Colour coded bins have been provided at all generation points for proper segregation and management of wastes.
- Water, Coal, Oil & Ash leakages & spillages are being controlled at the source itself to maintain clean work place and clean environment.
- Provided HDPE Lining on New Ash Pond (Ash Pond C) to minimize water pollution. Ash dykes are extra strengthened to prevent dyke failure.
- Implemented sound wastes management practices.
- Carrying out regular environmental audits by competent auditors and taking timely corrective measures.
- Carrying out Annual Hydrogeological study for studying characteristics of aquifers and quality of ground water.

Anjana Ranjan Dash

Anjana

Anjana Ranjan Dash
Director (Operations) & Occupier

भारत सरकार
परमाणु ऊर्जा विभाग
विकिरण एवं आइसोटोप प्रौद्योगिकी बोर्ड



Government of India
Department of Atomic Energy
Board of Radiation & Isotope Technology

Certificate Tracking ID / CTID : 2400322
Date of Issue / DOI : 30-Jan-2024
Certificate Serial No. / CSN : ULR-TC1170324000001567F



Radioanalytical Laboratory RADIOACTIVITY TEST CERTIFICATE

Ref : BRIT/RAL/DOM/841-856/MISC/614-629/23-24

To :
M/S. ODISHA POWER GENERATION CORPORATION LIMITED
IB-THERMAL POWER STATION,
BANHARPALI, JHARSUGUDA
ODISHA 768234

This is regarding the sample of "COAL ,FLY ASH & BOTTOM ASH" sent for radioactivity analysis vide your letter ref. no. ITPS/6739/WE dt. 20.12.2023 which as per above letter is drawn from consignment with the following markings, as shown in italics:

NAME & ADDRESS OF THE CUSTOMER : *M/S. ODISHA POWER GENERATION CORPORATION LIMITED
IB-THERMAL POWER STATION,
BANHARPALI, JHARSUGUDA,
ODISHA 768234*

SAMPLE DESCRIPTION : *1) OPGC-1 FEEDER COAL
2) OPGC-2 FEEDER COAL
3) FLY ASH FROM ESP OF UNIT #4
4) BOTTOM ASH FROM CLINKER GRINDER OF UNIT #4*

DATE OF SAMPLING : *04.12.2023*

DATE OF RECEIPT OF SAMPLE: 26.12.2023

DATE OF COMPLETION OF TEST: 25.01.2024

The samples were analysed for U-238, Th-232, Ra-226 and K-40 radioactivity content by HPGe gamma spectrometry and the values obtained are as follows:

Sr. No	SAMPLE DESCRIPTION	U-238 (Bq/Kg)	Th-232 (Bq/Kg)	Ra-226 (Bq/Kg)	K-40(Bq/Kg)
1	OPGC-1 FEEDER COAL	31.6 ± 1.4	44.8 ± 8	26.1 ± 3.4	87 ± 6.3
2	OPGC-2 FEEDER COAL	30.1 ± 1.4	47 ± 5.0	36.3 ± 3.8	71.9 ± 5.3
3	FLY ASH FROM ESP OF UNIT NO 4	79.5 ± 2.3	125 ± 4.9	91.1 ± 6.4	229 ± 12.4
4	BOTTOM ASH FROM CLINKER GRINDER OF UNIT NO 4	82.7 ± 2.7	118 ± 12.6	63.6 ± 6.3	168 ± 11.3

Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010.

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

Checked by:
GANPAT B NAKTI
Assistant

Authorized Signatory:
AJAY NANA THAMKE
OIC, RAL

***** End of Report *****

1/1

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BRIT/ BARC Vashi Complex, Sector 20, Navi Mumbai - 400 703 (Maharashtra)

फोन: ०२२ २७८७ ७००२/ ७००६
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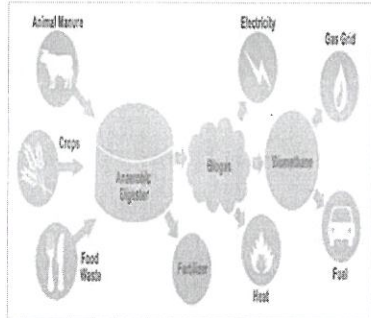
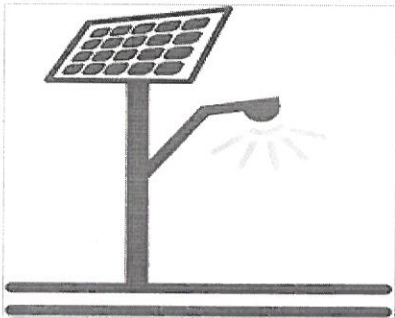
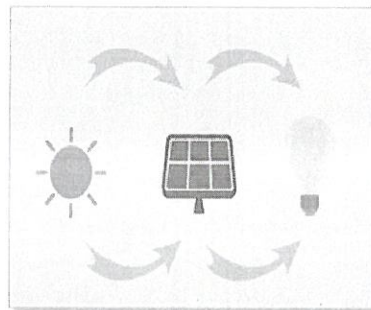
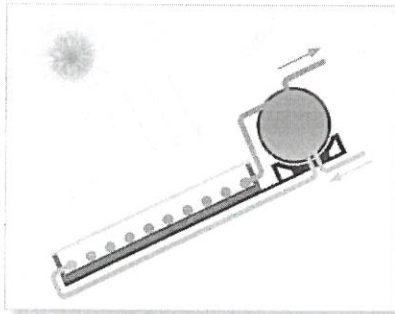


OPGC

Renewable Energy Projects

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Engg & Efficiency Dept.



Renewable Initiatives:

- Solar Photovoltaic Roof top plants
- Solar Powered LED Street Lights.
- Solar Water Heaters.

1. Roof top PV Plants :

Sl.no	Area	Installed Capacity	Connected Load
1	Switch yard	3 KW	2.2 KW
2	Ash Pond	6 KW	4.55 KW
3	DM Plant	9 KW	7.26 KW
4	CW Pump House	3 KW	2.1 KW
5	Plant Canteen	9 KW	6 KW + (2.0 KW flexible load of heater/food warmer)
6	Service Building	9 KW	9KW
	Total	39 KW	

a. PV Solar System at Switch Yard Roof:

3 KW PV Solar system installed at 220kV switchyard control room building commissioned in **April-2016**.

- **Connected load:** All indoor lighting of Switch yard control room, Front & rear halogen lights of Switch yard control room building.

b. PV Solar System at Ash Pond Control Room Roof:

2x3 KW PV Solar system installed at Ash Pond Control Room roof top commissioned in **June-2017**.

- **Connected load:** All indoor lighting of Switch gear control room, Battery room, Front & rear halogen lights of Ash pond switch gear room, all outdoor lighting of Ash Pond 33/6.6KV Switch yard.

c. PV Solar System at DM Plant Building Roof:

3x3 KW PV Solar system installed at DM Plant building Roof commissioned in **June-2018**.

- **Connected load:** All indoor lighting of control room, MCC room, Office rooms, Efficiency Lab, GCV Room & coal laboratory.

d. PV Solar System at CW Pump House Roof:

3 KW PV Solar system installed at CW Pump house roof commissioned in **June-2018**.

- **Connected load:** All indoor lighting of MCC room & outside lights.

e. PV Solar System at Plant Canteen building Roof:

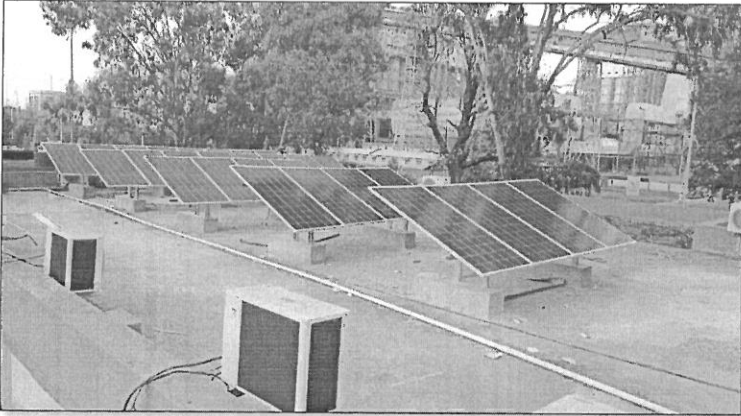
9 KW PV Solar system installed at Plant Canteen roof commissioned in **April-2019**.

Connected load: All indoor lighting of Canteen dining, fans, Water cooler, TV, Insect killers & Portable strip warmers.

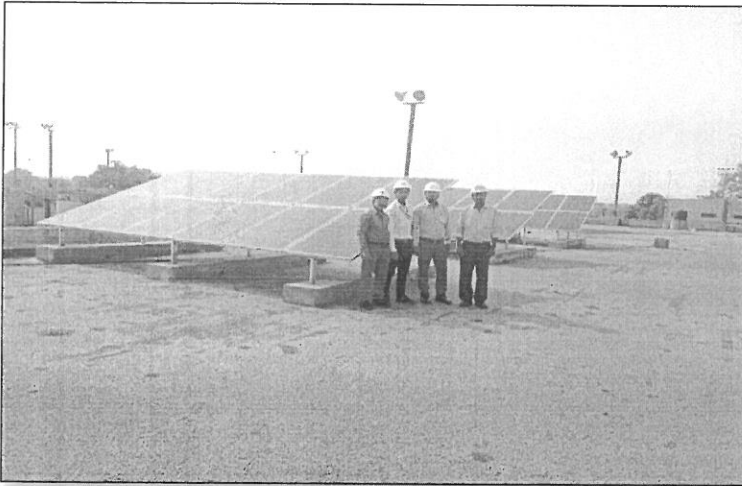
e. PV Solar System at Service Building Roof:

9 KW PV Solar system installed at service building roof commissioned in **March-2021**.

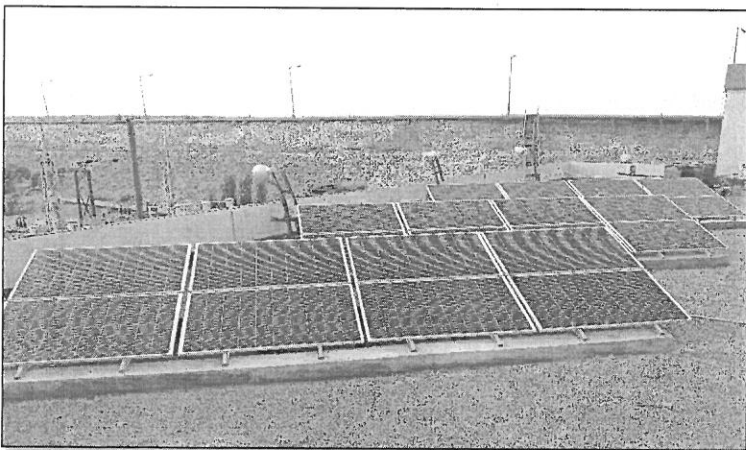
- **Connected load:** All indoor lighting, fans, water cooler of Service building 3rd floor.



Solar PV Plant in Canteen.



Solar PV Plant in DM Plant.



Solar PV Plant in Ash Pond.



Solar PV Plant at Service Building

2. Solar Powered LED Street Lights:



Solar Powered LED Street Light at Ash pond-C

- Total **60 no's** of solar 50 watt powered 30 watt LED's Street lights are installed in Ash Pond –C area.
- The total capacity of the system is **3KW**.
- Specific Features of the street lights: Pole Mounted type, Inbuilt Maintenance free Lithium Ion Battery With Motion Sensor.
- Lights are in service on an average 11 hours daily i.e. 6 pm to 5am .
- **Electrical Energy saved in a month** =60 no's x 30 watt x 11 hours x 30 days = **594 kWh**.

3. Solar Water Heater:

a. Solar Water Heater:



Solar Water Heater at Plant

900 Litre /day Solar Water Heater installed at roof of plant canteen commissioned in **March-2017**

- 3 Hot water tap points are provided at different locations inside plant canteen: for full filling the hot requirements like cooking, utensil cleaning, tea making, and vegetable washing & cleaning.
- Physical verification on **6th April 2019**, all the three hot tap points are working & serving their purpose.
- The electric geyser is in OFF condition.
- Energy Savings for geyser not in service: **2 kw X 4hrs X 30 Days=240 KWH**
(Also LPG Cylinder consumption savings is additional.)

b. Solar Water Heater at Guest House & Quarters

2000 Litre/day Solar Water Heater has been installed at ITPS Guest House (OPGC township) commissioned in **Sept-16.**

Solar water heater in :

D1 Type - 14000 LPD(7 x2000 LPD)

D3 Type-6000 LPD(3X 2000 LPD)

Purpose: To serve the hot water requirement to the individual rooms/houses.

Biogas Plant

a. Biogas supplied to guest house:

- 1 MTD- Per day capacity (which is running at 30% capacity providing 5to6 hrs gas supply to guesthouse.)

+

Solar water heater in :

D1 Type - 14000 LPD(7 x2000 LPD)

D3 Type-6000 LPD(3X 2000 LPD)





Environment Policy



OPGC understands the importance of the Environment and *In* recognition of the interests of the society in securing sustainable industrial growth, compatible with a wholesome environment, OPGC affirms to adhere the highest possible levels of performance in environmental compliance, practices, stewardship and assigns high importance to promote and maintain a pollution-free environment in all its activities.

Objectives

- To adopt a pro-active approach and place environmental aspects as one of the prime consideration in decision-making process.
- To comply with all applicable laws governing environment protection through appropriate mechanisms.
- To constantly improve upon the standards of pollution control and provide a leadership in environment management.
- To ensure efficient and optimal use of resources such as land, water, fuel, construction materials, oils, and chemicals etc. especially the non-renewable ones.
- To use non-polluting and environment-friendly technology.
- To monitor regularly air, water, land, noise and other environmental parameters.
- To spearhead waste management by adopting the 3Rs principle (Reduce, Re-use and Recycle) and safe disposal.
- To develop employees' awareness on environmental responsibilities and encourage adherence to sound environmental practices.
- To work closely with Government and local authorities to prevent or minimise adverse consequences of the industrial activities on the environment.
- To actively participate in social welfare and environmental development activities of the locality around its Units.
- To create carbon sink by adding green cover in and around ITPS.

Effective from: 12.08.2025

Sri Anjana Ranjan Dash
Director (Operations) & Occupier