

Ref. No. JSPL/Utkal C/25-26/43

Date:-24/05/2025

To,
The Addl. PCCF (C),
MoEF&CC, Regional Office (EZ),
A/3, Chandrasekharapur,
Bhubaneswar-751023, Odisha
E-mail: roez.bsr-mef@nic.in

Sub:- Submission of Six Monthly Environmental Clearance Compliance Report (Period Oct 2024 to Mar 2025) of Utkal-C Coal Mine, JSPL.

Ref:- Environmental clearance (EC) File No. J-11015/134/2006-IA.II(M), dt 5th Oct 2006 & Transfer of EC (from M/s Utkal Coal Ltd to M/s Jindal Steel & Power Ltd.), dt 28th February, 2023.

Dear Sir,

With kind reference to the above subject, please find attached herewith the Six Monthly Environmental Clearance Compliance Report (Period October 2024 to March 2025) of Utkal-C Coal Mine, of Jindal Steel & Power Limited, located in Village: Rajihran, Tehsil: Chendipada, District: Angul, Odisha in both hard and soft copy for your kind information & acknowledgement please.

The compliance report has also been uploaded in PARIVESH portal.

Thanking You,
Yours Faithfully,




Ashok Kumar,
Mine Agent
Utkal C Coal Mine, Jindal Steel and Power Limited

Enclosed:-Six monthly EC compliance report with all annexures.

Copy to: 1. The Member Secretary, OSPCB, BBSR (E-mail: paribesh1@ospcbboard.org)
2. The Regional Officer, OSPCB, Angul (E-mail: rospcb.angul@ospcbboard.org)
3. The Regional Director, CPCB, Kolkatta (E-mail: mkbiswas.cpcb@nic.in)

Six Monthly Environmental Clearance Compliance Report

(Period: Oct 2024 to Mar 2025)

of

Utkal-C Coal Mine

Villages: Rajjharan, Tehsil: Chendipada, Dist: Angul Odisha

of



Jindal Steel & Power Ltd.

**Jindal Centre, 12- R. N. Bhikaji Cama Place,
New Delhi - 110066 (Delhi) India**

**EC File No. J-11015/134/2006-IA.II(M), dt 5th Oct 2006 &
Transfer of EC (from M/s Utkal Coal Ltd to M/s Jindal Steel & Power Ltd.),
dt 28th February, 2023**

Submitted to



**Addl. PCCF (C) MoEF&CC,
Integrated Regional Office, A/3, Chandersekharapur, Bhubaneswar
Bhubaneswar, Odisha
[roez\[dot\]bsr-mef\[at\]nic\[dot\]in](mailto:roez[dot]bsr-mef[at]nic[dot]in)**

24th May, 2025

Six Monthly Environmental Clearance Compliance Report

(Period: 1st Oct 2024 to 31st Mar 2025)

EC Transfer : F. No. J-11015/134/2006-IA.II(M), dated 28th Feb., 2023

EC : No. J-11015/134/2006-IA.II(M), dated 5th Oct., 2006

Production : 3.37 MTPA – by Opencast Coal Mine

Lease Area : 575.071 Ha

Location : Utkal C Coal Mine, JSPL, Village -Raijharan, Tehsil -Chendipada, Dist. -Angul, Odisha

EC Transferred Conditions

Addl. Conditions

PP Response 24.05.2025

(i) Any change in scope of work will attract the provisions of Environment (Protection) Act, 1986 and the Environmental Impact Assessment Notification, 2006 in conjunction with the subsequent amendments / circulars.

Noted

(ii) PP to take approval of mine plan and mine closure plan by changing the land type of forest area from 165.151 to 171.705 ha from Ministry of Coal as applicable.

Complied.

(iii) All conditions stipulated in the EC vide its letter EC letter No. J-11015/134/2006-IA.II(M) dated 5th October, 2006 and EC amendment letter dated 28th July, 2009 shall remain unchanged.

Noted & Agreed

(iv) The successful bidder shall be liable, if any, for any act of violation of the EPA 1986 / EIA Notification 2006 / subsequent amendments and circulars which it has inherited during the transfer.

Noted & Agreed

(v) Any liability arising from the previous allottee in term of compliances of EC, shall have to be addressed by the new allottee.

Noted & Agreed

(vi) Successful bidder shall be liable for compliance of all court directions, if any.

Noted & Agreed

(vii) Hon'ble Supreme Court in an Writ Petition(s) Civil No 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to impose a condition in the mining lease and similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which any have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders / Project Proponent.

Noted & Agreed


Mine Agent
Utkal C Coal Mine
Jindal Steel and Power Limited



Six Monthly Environmental Clearance Compliance Report

(Period: 1st Oct 2024 to 31st Mar 2025)

EC Transfer : F. No. J-11015/134/2006-IA.II(M), dated 28th Feb., 2023
 EC : No. J-11015/134/2006-IA.II(M), dated 5th Oct., 2006
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EC Conditions

Specific Conditions	PP Response 24.05.2025
(i) All the conditions stipulated by SPCB in their NOC shall be effectively implemented	Noted & Complied. The mine has obtained Consent to Establish (CTE), an NOC from State Pollution Control Board, Odisha vide no 23468/IND-II-CTE-6787, dated 19.12.2022 & the compliance of stipulated conditions are in progress.
(ii) No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980.	Noted & Complied. The total mine lease of Utkal C is 575.07 ha out of which, 171.7 Ha is a forest land & rest 403.37 ha non-forest land. The mine already has obtained forest diversion for entire forest land received on 07.10.2011 & 23.05.2012, which was transferred; vide letter no 8-25/2010-FC, dated 12.12.2022.
(iii) Mining shall be carried out as per statute at a safe distance from the river and nallah flowing within the lease boundary. At the time of depillaring, protective bunds and garland drains shall be provided so that no water from the water bodies enters the mining area.	Noted & complied.
(iv) An embankment shall be constructed along the southern boundary adjoining the ML. The slope of the embankment shall at least 2:1 towards the ML. The height of the embankment shall be at least 5 m higher than the HFL. The dimensions of the embankment shall be at least 1805m in length, 20m width at the bottom and 5 m at the top.	Noted & being complied. An expert consultant has appointed and an internal study is also being done from him regarding the design of construction & other details for embankments.
(v) Topsoil of 3.62 Mm ³ should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt	As the mine has recently started to produce the coal, during development work as on date about 2,64,186m ³ top soil generated & stacked in separate area. This is also being used in green belt & plantation purpose. In the last year 2024-25, plantations of about 100 saplings were done in safety zone area. In this year 2025-26 plantation of about 30,000 saplings is proposed in this monsoon. 
(vi) OB should be stacked at earmarked external OB dumpsite within ML area and shall be a maximum height of 40m only and consist of benches of 10m each. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneshwar on yearly basis. The external OB dump shall be re-handled at the end of mine life and backfilled into the de-coaled area	Complied. 

Photo: Top Soil Dump & its use in Plantation

Photo: OB dump area

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EC Conditions

Specific Conditions	PP Response 24.05.2025
	The mine is maintaining external OB dump within ML area earmarked separately. The maximum height of 40m only and consist of benches of 10m each.
(vii) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains should be regularly de-silted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.	Noted & being complied. In the last year 2024-25, garland drain & catch drains of about 8.7km was made (around mine pit area - 3.5km, dump area -2.8km, stock yard -0.7km & along the road -1.7km). In this year garland drain & catch drains of 5 km long shall be made along with  Photo: Garland drain developed in Mine A three phase siltation pond of 0.18Ha was made by mine for de-siltation of mine water of approximate volume of 10,000KL (20m length x20m length x08 m depth x 3nos pits).  Photo: A three phase siltation cum settling pond To arrest the silt and sediment, check dam repairing work is also being done. All the drains & ponds are regularly cleaned & de-silted & maintained adequately. As like every year, this year 2025-26 also, additionally ~5km garland drain & 06 nos settling pits were developed around stock yard, OB dumps, top soil dump to allow proper settling of silt material.  Photo: Garland drain developed in mines



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EC Conditions

Specific Conditions	PP Response 24.05.2025
(viii) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data	Noted & being complied. The mine operation is recently started; top soil & OB dumps are still in progress and planning to build a toe wall all long dumps with stone mesh once dump get stabilized.
(ix) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc	Noted & shall be complied. However, at present, Crusher or CHP is not installed at mine. However, an eco-friendly, pipe conveyor system are being installed at Utkal C from mines to plant.  Photo: Eco-friendly pipe conveyor installation at Utkal C Coal Mine
(x) Drills should be wet operated	Noted & shall be complied when mine practices drilling & blasting activities in its mining operations.
(xi) Controlled blasting should be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented	Noted & shall be complied in future, at present, no drilling-blasting is envisaged, surface miner is used for coal excavation & HEMM are used for OB removals in place of blasting due to local geology.
(xii) The total area brought under afforestation shall not be less than 315.87 ha, and shall include external OB dump (74.96 ha), topsoil dump (7.84 ha) backfilled area covering 163.04 ha, along ML boundary, infrastructure (10 ha), along roads, safety zone and vacant area (20.36 ha) by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. 	Noted & being complied. As the mine is recently started its operations and area is limited, In the last year 2024-25, plantation of about 100 saplings is done in safety zone of mine. The nursery development in mine is ongoing for development of in-house local saplings.  Photo: Plantation at Utkal C
(xiii) Backfilling shall begin from the first year of mining operations and concurrent backfilling from 6th year onwards. A Progressive Mine Closure Plan shall be implemented and OB generated shall be simultaneously backfilled covering an area of 163.04 ha. Plantation shall be developed to cover 179.73 ha over the backfilled area and the higher benches which are gently sloped.	The mine has recently started its coal production, backfilling will commence after creating of the sufficient space between active working to in-pit dumping area (100m from backfilling area to active working) as per DGMS guidelines.
(xiv) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to the Ministry of Environment & Forests	Complied The ground water levels in existing well are being checked regularly and the water quality is carried out.

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EC Conditions

Specific Conditions

and to the Central Pollution Control Board quarterly within one month of monitoring

PP Response 24.05.2025



Photo: Monthly ground water level monitoring at Utkal mine site, JSPL

A new piezometric well is constructed in mine site with regular monitoring. The flow meter with DWR is being installed at site. All the GW Level & Quality monitoring data is attached herewith as annexure -1.

(xv) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.

Noted & being complied.

(xvi) ETP should also be provided for workshop and CHP wastewater.

Noted & complied.

The ETP of 25KLD installation work is in-progress.

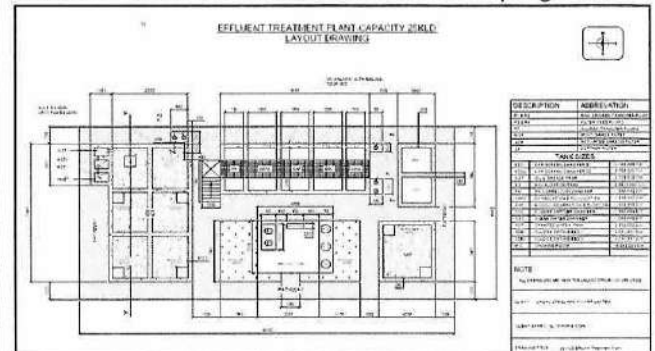


Photo: Layout of 25 KLD ETP at workshop under construction

(xvii) A Programme for conservation of the endangered species, particularly the Indian Elephant, found in the study area, shall be formulated and implemented in consultation with the concerned Department in the State Government. Separate funds shall be earmarked for implementation of the various activities there under and the status thereof shall be regularly reported to this Ministry and the MoEFC Regional Office, Bhubaneswar

The mine is committed for conservation of the endangered species, particularly the Indian Elephant. In this respect, the site specific wild life conservation plan (SSWLCP) is already prepared & approved from Chief Wild Life Warden, vide memo no 1776/1WL (C) SSP-275/2011 Bhubaneswar, dated 11th March 2011 & a fund of ₹ 331 Lakhs was also deposited by mine, which is being implemented by DFO, Angul. The Mine shall provide all necessary support in this regard.

(xviii) Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional office at Bhubaneswar.

Being complied.

The mine is recently started its coal production. For execution of digital processing of entire lease area by using remote sensing technique a study shall be undertaken, which shall be done from a reputed agency from FY- 2025-26.

(xix) Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH,

Noted & being complied.

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EC Conditions

Specific Conditions	PP Response 24.05.2025
Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS	
(xx) R&R of village Raijharan shall be completed within the specified time schedule and shall be not less than that of the National R&R Policy.	Complied.
(xxi) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Noted & shall be complied.
(xxii) Consent to Operate shall be obtained before expanding mining operations.	Complied. The mine has valid Consent to Operate issued from OSPCB vide no 43330.IND-I-CON-6901, dated 28.03.2024, consent order no 3098.
General Conditions	
(i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	Noted & Complied.
(ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.	Noted & Complied.
(iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO ₂ and NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	Complied. Four ambient air quality monitoring stations are established in core & buffer zone, namely one at mine site office, three at surrounding villages such as Raijharan, Khosla etc. Apart from this additional two Continuous Ambient Air Quality Monitoring stations (CAAQMS) are also installed at site.  Photo: Ambient Air Quality Monitoring at Utkal C Mine  Photo: CAAQMS at (Core & Buffer zone) Utkal C Mine The entire air monitoring data is also attached herewith in this report as annexure-2.
(iv) Data on ambient air quality (SPM, RPM, SO ₂ and NO _x) should be regularly submitted to the Ministry including its Regional Office at Bhubaneshwar and to the State Pollution Control Board and the Central Pollution Control Board once in six	Complied.



Mine Agent

Utkal C Coal Mine

Jindal Steel and Power Limited

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months.	 Photo: Air quality monitoring at working zone at Utkal C Mine The air quality at work zone at various locations is regularly done by mine as per GSR 742 (E), dated 25th Sept., 2000 and subsequent amendments. All the environmental data of air, water etc is submitted to IRO, MoEF&CC along with CPCB & SPCB with six monthly EC compliance. The entire air monitoring data is also attached herewith in this report as annexure-2.
(v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained 	Fugitive dust emissions from all sources is been controlled with 05 nos of mobile water sprinklers with mist gun on daily basis.  Photo: Mobile water sprinklers use in Utkal C Mine Apart from all above fixed fog cannon to arrest the fugitive dust from coal stock yard etc are procured & installed at site. Additionally 06 nos of fixed fog cannon are installed at coal stock area to control the fugitive dust.  Photo: Dust Suppression at coal stock yard with Fog Cannons
(vi) Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc should be provided with ear plugs/muffs.	Noted & complied. Surface miner is being used at mine and currently no drilling blasting is done at site. All the HEMM are equipped with a/c cabins.


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EC Conditions

Specific Conditions	PP Response 24.05.2025
	 Photo: Noise Monitoring & Plantation at Site All the persons working in mine are provided PPE including ear plugs. Regular noise monitoring is also been done at site. To reduce the ambient noise, plantation and GB is done in mine. The ambient noise level monitoring reports are attached herewith as annexure-3.
(vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Noted & being complied. The industrial wastewater, specially generated from workshop shall be treated in a 25 KLD ETP with Oil & grease trap. All treated water generated is used for plantation purpose. The mine water quality is also been check on regular basis the monitoring report of the same is attached as annexure-4.
(viii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	Complied. The transportation of coal to the adjacent steel & power plant shall be done by conveyor system in upcoming days. The civil & construction work is in-progress as erection of pillars etc for dust free eco-friendly mineral transport.  Photo: Eco-friendly pipe conveyor installation Coal Mine to Plant Till date all the mineral shall be dispatched through road network using i3MS software with tarpaulins covered vehicles.  Photo: Coal transportation with covered trucks Utkal C Coal Mine

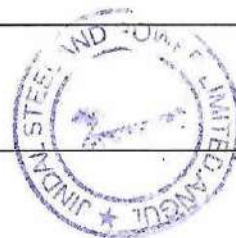


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EC Conditions

Specific Conditions	PP Response 24.05.2025
	Any dispatch vehicles are fit for transport having valid PUCs as all vehicles are tagged through i3MS software used by mine which ensures the fitness, PUC, insurance etc of all vehicles before dispatch.
(ix) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board	Complied.
(x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed.	Complied
(xi) A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	Complied
(xii) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhubaneshwar.	Noted & being complied.
(xiii) A copy of the EC will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	Complied.
(xiv) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.	Complied.
(xv) The Project authorities should advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the ministry of Environment & Forests at http://envfor.nic.in	Complied.

Ad
Mine Agent
Utkal C Coal Mine
Jindal Steel and Power Limited



Six Monthly Environmental Clearance Compliance Report

(Period: 1st Oct 2024 to 31st Mar 2025)

EC Transfer : F. No. J-11015/134/2006-IA.II(M), dated 28th Feb., 2023
 EC : No. J-11015/134/2006-IA.II(M), dated 5th Oct., 2006 (Amendment in EC).
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 Location : Utkal C Coal Mine, JSPL, Village -Raijharan, Tehsil -Chendipada, Dist. -Angul, Odisha

Specific Condition (xii):

"The total area brought under afforestation and protected shall be not less than 312.55 ha, and shall include external OB dump (29 ha), excavated area (163.04 ha), roads (10 ha), embankment (4.51 ha) and undisturbed area (106 ha) by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be not less than 2500 plants per ha"

Modification of EC Letter with Additional Conditions

Addl. EC Conditions	PP Response 24.05.2025
(i) Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, in SPM and RSPM shall be carried out at least once in six months and data thereon recorded and regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board as part of the Monitoring report.	Complied. All the heavy metal monitoring data are also attached along with this report in annexure-5.
(ii) A copy of the clearance letter shall be displayed on the company's website. A copy of the clearance letter shall be displayed on the website of the concerned State Pollution Control Board.	Complied. The copy of Environment Clearance is also displayed on the company's website along with State Pollution Control Board. https://www.jindalsteel.com/environmental-compliance.html
(iii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB. The compliance status of the stipulated EC conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.	Complied. The 1 st June 2024 six monthly EC compliance report has already been uploaded in PARIVEH portal along with copy submission to IRO, MoEF&CC and the respective Zonal offices of CPCB and the SPCB. The compliance status of same is also uploaded on company's website. The environmental monitoring data also displayed in mine entry gate in LED digital display board.  Environmental data display at Entry Gate of Mine https://www.jindalsteel.com/environmental-compliance.html
(iv) The environmental statement for each financial year ending 31 st March in Form-V is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MOEF by E-mail.	Complied. The environmental statement for the financial year 2023-24 ending 31 st March 2024 in Form-V is submitted vide no. JSPL/ANGUL/EMD/24-25/49, dated 20 th Sept., 2024. The copy of same also been uploaded on companies website. https://www.jindalsteel.com/environmental-compliance.html



Mine Agent
Utkal C Coal Mine
Jindal Steel and Power Limited



Ground Water Level Monitoring

TEST REPORT

Ref: Envlab/25-26/TR-00691

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ground Water Level	Sampling Procedure	:	As per IS 3025
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	10.03.2025	Piezometer at Mines Office in Rajiharana 20° 57' 48.33" N 84° 57' 14.5152" E	6.37
2	10.03.2025	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	1.50
3	10.03.2025	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	7.11
4	10.03.2025	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	3.79
5	10.03.2025	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	6.16
6	10.03.2025	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	3.57
7	10.03.2025	Dugwell at near Koshala 21° 0' 44.928" N 84° 56' 8.3544" E	5.86
8	10.03.2025	Dugwell at near Chhotabereni 20° 57' 48.2076" N 84° 59' 26.9448" E	5.98
9	10.03.2025	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	6.27
10	10.03.2025	Dugwell at near Kankera 20° 57' 11.3616" N 84° 59' 13.4088" E	7.18



Reviewed By:



Approved By:

TEST REPORT

Ref: Envlab/24-25/TR-17263

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ground Water Level	Sampling Procedure	: As per IS 3025
Sample Condition	:	NA	Sampling done by	: VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	18.02.2025	Piezometer at Mines Office in Rajharana 20° 57' 48.33" N 84° 57' 14.5152" E	7.98
2	18.02.2025	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	1.6
3	18.02.2025	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	7.81
4	18.02.2025	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	4.50
5	18.02.2025	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	5.00
6	18.02.2025	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	2.67
7	18.02.2025	Dugwell at near Koshala 21° 0' 44.928" N 84° 56' 8.3544" E	4.98
8	18.02.2025	Dugwell at near Chhotabereni 20° 57' 48.2076" N 84° 59' 26.9448" E	4.05
9	18.02.2025	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	5.15
10	18.02.2025	Dugwell at near Kankerai 20° 57' 11.3616" N 84° 59' 13.4088" E	5.68





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-16431

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ground Water Level	Sampling Procedure	:	As per IS 3025
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	29.01.2025	Piezometer at Mines Office in Rajiharana 20° 57' 48.33" N 84° 57' 14.5152" E	7.95
2	29.01.2025	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	1.54
3	29.01.2025	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	6.23
4	29.01.2025	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	5.33
5	29.01.2025	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	4.42
6	29.01.2025	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	1.80
7	29.01.2025	Dugwell at near Koshala 21° 0' 44.928" N 84° 56' 8.3544" E	5.49
8	29.01.2025	Dugwell at near Chhotaberani 20° 57' 48.2076" N 84° 59' 26.9448" E	4.62
9	29.01.2025	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	4.12
10	29.01.2025	Dugwell at near Kankera 20° 57' 11.3616" N 84° 59' 13.4088" E	4.82



TEST REPORT

Ref: Envlab/24-25/TR-14586

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ground Water Level	Sampling Procedure	:	As per IS 3025
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	13.12.2024	Piezometer at Mines Office in Rajjharana 20° 57' 48.33" N 84° 57' 14.5152" E	8.08
2	13.12.2024	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	0.61
3	13.12.2024	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	3.55
4	13.12.2024	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	2.04
5	13.12.2024	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	1.13
6	13.12.2024	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	0.90
7	13.12.2024	Dugwell at near Koshala 21° 0' 44.928" N 84° 56' 8.3544" E	2.88
8	13.12.2024	Dugwell at near Chhotaberani 20° 57' 48.2076" N 84° 59' 26.9448" E	2.37
9	13.12.2024	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	2.21
10	13.12.2024	Dugwell at near Kankera 20° 57' 11.3616" N 84° 59' 13.4088" E	2.80
11	13.12.2024	Dugwell at near Balugadia	2.26



 Reviewed By:



 Approved By:



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-13945

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ground Water Level	Sampling Procedure	:	As per IS 3025
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	18.11.2024	Piezometer at Mines Office in Rajiharana 20° 57' 48.33" N 84° 57' 14.5152" E	8.36
2	18.11.2024	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	0.58
3	18.11.2024	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	3.61
4	18.11.2024	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	2.11
5	18.11.2024	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	1.17
6	18.11.2024	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	0.92
7	18.11.2024	Dugwell at near Koshala 21° 0' 44.928" N 84° 56' 8.3544" E	3.01
8	18.11.2024	Dugwell at near Chhotabereni 20° 57' 48.2076" N 84° 59' 26.9448" E	2.48
9	18.11.2024	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	2.26
10	18.11.2024	Dugwell at near Kankera 20° 57' 11.3616" N 84° 59' 13.4088" E	2.89
11	18.11.2024	Dugwell at near Balugadia	2.31



Reviewed By:



Approved By:

TEST REPORT

Ref: Envlab/24-25/TR-12289

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ground Water Level	Sampling Procedure	:	As per IS 3025
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No	Dates of Monitoring	Monitoring Location	Result, mtr
1	21.10.2024	Piezometer at Mines Office in Rajharana 20° 57' 48.33" N 84° 57' 14.5152" E	6.83
2	21.10.2024	Piezometer at near Weigh Bridge 20° 57' 31.6764" N 84° 57' 23.6988" E	5.35
3	21.10.2024	Dugwell at near Nandichor 20° 58' 27.9876" N 84° 55' 49.4328" E	1.45
4	21.10.2024	Dugwell at near Similisahi 20° 59' 45.7368" N 84° 56' 41.6328" E	0.81
5	21.10.2024	Dugwell at near Galagodia 20° 58' 8.7348" N 84° 57' 49.4928" E	1.52
6	21.10.2024	Dugwell at near Tangersahi 20° 57' 43.0992" N 84° 58' 2.0892" E	0.68
7	21.10.2024	Dugwell at near Koshal 21° 0' 44.928" N 84° 56' 8.3544" E	2.27
8	21.10.2024	Dugwell at near Chhotabereni 20° 57' 48.2076" N 84° 59' 26.9448" E	1.39
9	21.10.2024	Dugwell at near Nisha 20° 55' 39.0108" N 85° 0' 4.8348" E	0.60
10	21.10.2024	Dugwell at near Kankera 20° 57' 11.3616" N 84° 59' 13.4088" E	1.23

Reviewed By: 

Approved By: 

TEST REPORT

Ref: Envlab/24-25/TR-17266

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-1	Sampling Location	:	Raijharana (Near Mines Office)
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	7.15
4	Turbidity	NTU, max	1.0	APHA 2130 B	4.8
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	510
6	Calcium (as Ca)	mg/l ,max	75	APHA 3500Ca B	18.2
7	Chloride (as Cl)	mg/l ,max	250	APHA 4500Cl- B	50.6
8	Copper (as Cu)	mg/l ,max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l ,max	1.0	APHA 4500F-C	0.29
10	Free Residual Chlorine	mg/l ,min	0.2	APHA 4500Cl B	0.11
11	Iron (as Fe)	mg/l ,max	1	APHA 3500Fe B	0.25
12	Magnesium (as Mg)	mg/l ,max	30	APHA 3500Mg,B	20.50
13	Manganese (as Mn)	mg/l ,max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l ,max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l ,max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l ,max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l ,max	200	APHA 4500SO42-B	9.2
18	Nitrate (as NO3)	mg/l ,max	45	APHA 4500 NO3- B	1.11
19	Total Alkalinity	mg/l ,max	200	APHA 2320 B	140.6
20	Total Hardness	mg/l ,max	200	APHA 2340 C	129.8
21	Zinc(as Zn)	mg/l ,max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l ,max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l ,max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l ,max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l ,max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l ,max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.02
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05


Reviewed by


Approved by

TEST REPORT

Ref: Envlab/24-25/TR-17267

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-2	Sampling Location	:	Weigh Bridge
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	7.02
4	Turbidity	NTU, max	1.0	APHA 2130 B	27.4
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	472.6
6	Calcium (as Ca)	mg/l ,max	75	APHA 3500Ca B	30.2
7	Chloride (as Cl)	mg/l ,max	250	APHA 4500Cl- B	28.4
8	Copper (as Cu)	mg/l ,max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l ,max	1.0	APHA 4500F-C	0.42
10	Free Residual Chlorine	mg/l ,min	0.2	APHA 4500Cl B	0.12
11	Iron (as Fe)	mg/l ,max	1	APHA 3500Fe B	0.22
12	Magnesium (as Mg)	mg/l ,max	30	APHA 3500Mg,B	2.77
13	Manganese (as Mn)	mg/l ,max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l ,max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l ,max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l ,max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l ,max	200	APHA 4500SO42-B	8.12
18	Nitrate (as NO3)	mg/l ,max	45	APHA 4500 NO3- B	0.21
19	Total Alkalinity	mg/l ,max	200	APHA 2320 B	202.6
20	Total Hardness	mg/l ,max	200	APHA 2340 C	86.8
21	Zinc(as Zn)	mg/l ,max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l ,max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l ,max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l ,max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l ,max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l ,max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.03
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05



Reviewed by



Approved by

TEST REPORT

Ref: Envlab/24-25/TR-17268

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-3	Sampling Location	:	Tangersahi
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	7.56
4	Turbidity	NTU, max	1.0	APHA 2130 B	1.22
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	530.6
6	Calcium (as Ca)	mg/l ,max	75	APHA 3500Ca B	42.6
7	Chloride (as Cl)	mg/l ,max	250	APHA 4500Cl- B	156.2
8	Copper (as Cu)	mg/l ,max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l ,max	1.0	APHA 4500F-C	1.72
10	Free Residual Chlorine	mg/l ,min	0.2	APHA 4500Cl B	0.14
11	Iron (as Fe)	mg/l ,max	1	APHA 3500Fe B	0.32
12	Magnesium (as Mg)	mg/l ,max	30	APHA 3500Mg,B	61.29
13	Manganese (as Mn)	mg/l ,max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l ,max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l ,max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l ,max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l ,max	200	APHA 4500SO42-B	58.6
18	Nitrate (as NO3)	mg/l ,max	45	APHA 4500 NO3- B	27.9
19	Total Alkalinity	mg/l ,max	200	APHA 2320 B	670.5
20	Total Hardness	mg/l ,max	200	APHA 2340 C	358.6
21	Zinc(as Zn)	mg/l ,max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l ,max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l ,max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l ,max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l ,max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l ,max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.03
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05


Reviewed by


Approved by

TEST REPORT

Ref: Envlab/24-25/TR-17269

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-4	Sampling Location	:	Koshala
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	6.92
4	Turbidity	NTU, max	1.0	APHA 2130 B	<1.0
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	580.6
6	Calcium (as Ca)	mg/l ,max	75	APHA 3500Ca B	50.4
7	Chloride (as Cl)	mg/l ,max	250	APHA 4500Cl- B	88.4
8	Copper (as Cu)	mg/l ,max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l ,max	1.0	APHA 4500F-C	0.14
10	Free Residual Chlorine	mg/l ,min	0.2	APHA 4500Cl B	0.15
11	Iron (as Fe)	mg/l ,max	1	APHA 3500Fe B	0.26
12	Magnesium (as Mg)	mg/l ,max	30	APHA 3500Mg,B	18.60
13	Manganese (as Mn)	mg/l ,max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l ,max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l ,max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l ,max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l ,max	200	APHA 4500SO42-B	64.6
18	Nitrate (as NO3)	mg/l ,max	45	APHA 4500 NO3- B	75.6
19	Total Alkalinity	mg/l ,max	200	APHA 2320 B	240
20	Total Hardness	mg/l ,max	200	APHA 2340 C	202.4
21	Zinc(as Zn)	mg/l ,max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l ,max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l ,max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l ,max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l ,max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l ,max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.02
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05


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TEST REPORT

Ref: Envlab/24-25/TR-17270

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-5	Sampling Location	:	Chhotaberani
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	6.98
4	Turbidity	NTU, max	1.0	APHA 2130 B	58
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	586.4
6	Calcium (as Ca)	mg/l, max	75	APHA 3500Ca B	12.2
7	Chloride (as Cl)	mg/l, max	250	APHA 4500Cl- B	15.6
8	Copper (as Cu)	mg/l, max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l, max	1.0	APHA 4500F-C	<0.01
10	Free Residual Chlorine	mg/l, min	0.2	APHA 4500Cl B	0.12
11	Iron (as Fe)	mg/l, max	1	APHA 3500Fe B	0.31
12	Magnesium (as Mg)	mg/l, max	30	APHA 3500Mg,B	2.95
13	Manganese (as Mn)	mg/l, max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l, max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l, max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l, max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l, max	200	APHA 4500SO42-B	21.6
18	Nitrate (as NO3)	mg/l, max	45	APHA 4500 NO3- B	11.8
19	Total Alkalinity	mg/l, max	200	APHA 2320 B	38.5
20	Total Hardness	mg/l, max	200	APHA 2340 C	42.6
21	Zinc(as Zn)	mg/l, max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l, max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l, max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l, max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l, max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l, max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.03
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05


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TEST REPORT

Ref: Envlab/24-25/TR-17271

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Drinking Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	DW-6	Sampling Location	:	Nandichhor
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

Sl.No	Parameters	Unit	Standard as per IS 10500: 2012 Amnd 2015 & 2018 (Acceptable Limit)	Test methods	Results
1	Color	Hazen	5	APHA 2120 B,C	<5
2	Odour	--	Agreeable	APHA 2120 B	Agreeable
3	pH value	--	6.5-8.5	APHA 4500 H+B	7.18
4	Turbidity	NTU, max	1.0	APHA 2130 B	4.3
5	Total Dissolved Solids at 180°C	mg/l	500	APHA 2540 C	556.8
6	Calcium (as Ca)	mg/l ,max	75	APHA 3500Ca B	18.6
7	Chloride (as Cl)	mg/l ,max	250	APHA 4500Cl- B	29.8
8	Copper (as Cu)	mg/l ,max	0.05	APHA 3111B,C	<0.01
9	Fluoride (as F)	mg/l ,max	1.0	APHA 4500F-C	0.32
10	Free Residual Chlorine	mg/l ,min	0.2	APHA 4500Cl B	0.19
11	Iron (as Fe)	mg/l ,max	1	APHA 3500Fe B	0.24
12	Magnesium (as Mg)	mg/l ,max	30	APHA 3500Mg,B	24.31
13	Manganese (as Mn)	mg/l ,max	0.1	APHA 3500Mn B	<0.05
14	Mineral oil	mg/l ,max	1.0	APHA 5220 B	<0.05
15	Phenolic compounds	mg/l ,max	0.001	APHA 5530 B,C	<0.001
16	Selenium(as Se)	mg/l ,max	0.01	APHA 3114B	<0.1
17	Sulphate (as SO4)	mg/l ,max	200	APHA 4500SO42-B	0.19
18	Nitrate (as NO3)	mg/l ,max	45	APHA 4500 NO3- B	0.46
19	Total Alkalinity	mg/l ,max	200	APHA 2320 B	162.8
20	Total Hardness	mg/l ,max	200	APHA 2340 C	146.5
21	Zinc(as Zn)	mg/l ,max	5.0	APHA 3111B,C	<1.0
22	Cadmium (as Cd)	mg/l ,max	0.003	APHA 3111B,C	<0.003
23	Cyanide (as CN)	mg/l ,max	0.05	APHA 4500CN-C,D	<0.05
24	Lead (as Pb)	mg/l ,max	0.01	APHA 3111B,C	<0.01
25	Mercury (as Hg)	mg/l ,max	0.001	APHA 3500 Hg	<0.001
26	Total arsenic (as As)	mg/l ,max	0.01	APHA 3114B	<0.004

27	Total Coli forms	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 B	<1.8
28	Fecal Coli Form	MPN/100ml	---	APHA 9221 E	<1.8
29	E. coli	MPN/100ml	Shall not be detected in any 100 ml sample	APHA 9221 F	<1.8
30	Boron	mg/l ,max	0.5	APHA 4500 B, B	<0.1
31	Molybdenum	mg/l ,max	0.07	IS 3025 (Part 2)	<0.005
32	Aluminum	mg/l ,max	0.03	APHA 3500 Al B	<0.005
33	Silver	mg/l ,max	0.1	IS 13428	<0.01
34	Anionic detergent as MBAS	--	0.2	IS 13428	<0.01
35	Barium	mg/l ,max	0.7	APHA 3111 B	<0.05
36	Total Chromium	mg/l ,max	0.05	APHA 3111 B	0.02
37	Sulphide as H ₂ S	mg/l ,max	0.05	APHA 4500 -S.D	ND
38	Ammonia as NH ₃ -N	mg/l ,max	0.5	APHA 4500 NH ₃ .C	<0.05

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Air Quality Monitoring

TEST REPORT

Ref: Envlab/25-26/TR-00684

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	: Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.03.2025	52.2	29.2	14.8	12.5
06.03.2025	53.1	28.2	17.2	15.3
10.03.2025	52.8	28.8	19.8	15.4
13.03.2025	51.5	29.2	15.2	14.1
17.03.2025	54.4	29.3	17.8	16.6
20.03.2025	55.6	28.2	17.6	15.8
24.03.2025	54.8	28.8	15.5	12.8
27.03.2025	52.4	27.8	15.2	15.3
Monthly Averages	53.4	28.7	16.6	14.7
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

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TEST REPORT

Ref: Envlab/25-26/TR-00685

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	: Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.03.2025	50.8	29.8	14.8	17.9
06.03.2025	53.5	31.1	17.5	17.7
10.03.2025	54.3	31.2	16.2	14.9
13.03.2025	50.3	29.5	14.8	18.8
17.03.2025	51.7	31.5	15.5	19.7
20.03.2025	52.3	31.9	15.8	16.7
24.03.2025	52.8	32.5	17.8	15.9
27.03.2025	51.8	30.8	16.7	14.8
Monthly Averages	52.2	31.0	16.1	17.1
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

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Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/25-26/TR-00686

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	: Similisahi 20° 59' 46.365" N 80° 56' 43.005" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.03.2025	52.4	30.3	14.2	16.8
06.03.2025	53.2	30.7	17.2	17.8
10.03.2025	52.8	32.1	15.8	16.9
13.03.2025	51.8	30.8	16.2	16.4
17.03.2025	53.3	31.5	15.7	13.8
20.03.2025	55.4	32.7	14.8	15.4
24.03.2025	52.9	31.2	16.1	14.6
27.03.2025	53.5	31.5	14.2	15.8
Monthly Averages	53.2	31.4	15.5	15.9
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



Reviewed By



Approved By



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/25-26/TR-00687

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.03.2025	47.2	29.5	10.8	15.2
06.03.2025	46.4	29.3	10.2	18.7
10.03.2025	46.2	29.6	10.1	17.1
13.03.2025	46.8	27.5	9.8	12.4
17.03.2025	48.7	27.6	10.8	14.4
20.03.2025	50.2	28.3	11.5	15.5
24.03.2025	48.4	27.2	9.8	16.6
27.03.2025	47.3	26.0	9.2	15.8
Monthly Averages	47.7	28.1	10.3	15.7
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-17259

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	:	Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.02.2025	52.6	29.5	15.8	13.6
06.02.2025	52.8	27.8	17.6	15.8
10.02.2025	53.4	29.6	19.4	5.2
13.02.2025	51.8	29.4	15.8	14.9
17.02.2025	54.2	28.8	18.4	17.2
20.02.2025	56.1	28.7	18.3	16.3
24.02.2025	55.2	29.2	16.2	13.4
27.02.2025	52.8	28.4	15.7	15.9
Monthly Averages	53.6	28.9	17.2	14.0
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-17260

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	: Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.02.2025	51.6	30.6	15.6	18.5
06.02.2025	53.8	31.5	18.4	18.6
10.02.2025	55.4	32.2	17.2	15.9
13.02.2025	51.2	30.4	15.3	19.4
17.02.2025	52.9	32.6	15.9	20.1
20.02.2025	52.7	32.2	16.4	17.4
24.02.2025	53.4	33.1	18.2	16.3
27.02.2025	52.6	31.5	17.2	15.4
Monthly Averages	53.0	31.8	16.8	17.7
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-17261

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	: Similisahi 20° 59' 46.365" N 80° 56' 43.005" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.02.2025	52.6	30.6	14.6	17.2
06.02.2025	54.3	31.8	17.5	18.1
10.02.2025	53.1	32.5	16.3	17.6
13.02.2025	52.8	31.9	16.5	16.5
17.02.2025	54.5	32.7	16.8	14.8
20.02.2025	55.9	33.1	15.9	16.5
24.02.2025	53.7	32.1	17.3	15.7
27.02.2025	54.1	32.1	14.9	16.6
Monthly Averages	53.9	32.1	16.2	16.6
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-17262

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
03.02.2025	48.2	30.6	11.2	15.6
06.02.2025	46.9	29.8	9.6	18.4
10.02.2025	46.5	29.8	10.5	17.6
13.02.2025	47.9	28.6	10.7	13.3
17.02.2025	49.8	28.7	11.3	14.9
20.02.2025	50.4	28.5	12.4	16.5
24.02.2025	49.9	28.6	9.5	16.5
27.02.2025	48.4	27.1	9.7	16.2
Monthly Averages	48.5	29.0	10.6	16.1
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012





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TEST REPORT

Ref: Envlab/24-25/TR-16427

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	: Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
02.01.2025	49.8	28.7	17.5	11.5
06.01.2025	50.3	28.9	19.2	12.6
09.01.2025	51.2	29.3	15.4	10.8
13.01.2025	51.8	29.4	17.9	14.3
16.01.2025	51.6	30.1	16.8	15.2
20.01.2025	52.2	28.5	15.4	12.6
23.01.2025	52.7	28.4	18.4	12.8
27.01.2025	50.4	30.2	14.6	13.4
30.01.2025	50.8	31.1	15.4	12.9
Monthly Averages	51.2	29.4	16.7	12.9
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By



Approved By





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TEST REPORT

Ref: Envlab/24-25/TR-16428

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	: Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.01.2025	53.2	30.2	15.4	18.3
06.01.2025	52.1	31.6	16.2	19.5
09.01.2025	54.6	32.5	16.4	19.7
13.01.2025	52.5	32.4	15.9	20.6
16.01.2025	51.8	31.8	16.3	22.4
20.01.2025	52.7	32.4	17.2	21.3
23.01.2025	52.3	30.9	18.2	20.5
27.01.2025	52.7	32.1	15.4	19.4
30.01.2025	52.2	30.6	16.2	18.5
Monthly Averages	52.7	31.6	16.4	20.0
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-16429

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	: Similisahi 20° 59' 46.365" N 80° 56' 43.005" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.01.2025	50.3	31.1	15.6	16.8
06.01.2025	49.8	30.1	15.2	19.1
09.01.2025	49.6	32.1	14.9	17.4
13.01.2025	50.2	30.6	18.2	16.8
16.01.2025	51.3	31.3	15.7	16.2
20.01.2025	50.7	30.6	17.1	15.6
23.01.2025	52.6	29.8	16.5	17.3
27.01.2025	53.8	30.8	16.2	18.1
30.01.2025	51.4	30.5	15.4	15.9
Monthly Averages	51.1	30.8	16.1	17.0
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By
ABSR

Approved By
ABSR

TEST REPORT

Ref: Envlab/24-25/TR-16430

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.01.2025	46.8	29.3	9.2	14.2
06.01.2025	48.5	29.6	10.6	16.2
09.01.2025	48.7	28.6	10.5	17.6
13.01.2025	46.9	27.6	11.8	14.5
16.01.2025	47.2	27.5	12.7	15.9
20.01.2025	47.5	28.6	13.2	16.2
23.01.2025	46.1	28.7	10.9	17.2
27.01.2025	47.9	29.1	12.4	18.4
30.01.2025	48.9	29.8	11.8	18.6
Monthly Averages	47.6	28.8	11.5	16.5
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

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Reviewed By
VISIONTEK CONSULTANCY SERVICES PVT. LTD.

BBOR
Approved By
VISIONTEK CONSULTANCY SERVICES PVT. LTD.



Visiontek Consultancy Services Pvt. Ltd.

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TEST REPORT

Ref: Envlab/24-25/TR-14582

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	: Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.12.2024	50.2	28.7	19.2	10.5
05.12.2024	49.7	27.6	18.7	13.6
09.12.2024	51.3	29.4	13.4	14.8
12.12.2024	48.6	29.3	16.5	15.4
16.12.2024	49.7	30.6	17.3	17.9
19.12.2024	52.1	32.5	15.4	12.6
23.12.2024	50.7	31.7	18.6	11.4
26.12.2024	48.8	31.4	12.9	13.6
30.12.2024	49.5	29.9	14.5	15.2
Monthly Averages	50.1	30.1	16.3	13.9
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By  

Approved By  

TEST REPORT

Ref: Envlab/24-25/TR-14583

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	: Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.12.2024	52.3	31.2	10.6	22.4
05.12.2024	55.6	32.2	13.9	20.8
09.12.2024	51.2	30.6	15.4	21.3
12.12.2024	52.4	30.4	18.6	19.7
16.12.2024	52.6	31.9	17.6	19.6
19.12.2024	49.8	29.9	11.9	18.7
23.12.2024	50.7	29.4	18.4	18.6
26.12.2024	52.6	31.3	16.3	20.4
30.12.2024	53.4	32.2	18.2	21.7
Monthly Averages	52.3	31.0	15.7	20.4
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By  

 Approved By 

TEST REPORT

Ref: Envlab/24-25/TR-14584

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	: Similisahi 20° 59' 46.365" N 80° 56' 43.005" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.12.2024	51.6	29.9	15.6	17.5
05.12.2024	50.8	29.5	18.2	16.2
09.12.2024	49.6	28.8	17.4	15.9
12.12.2024	48.7	28.2	15.5	15.4
16.12.2024	48.2	28.0	13.9	18.6
19.12.2024	53.2	30.9	16.4	18.8
23.12.2024	54.8	31.8	16.8	12.6
26.12.2024	55.1	32.0	15.5	16.3
30.12.2024	50.6	29.3	17.9	15.4
Monthly Averages	51.4	29.8	16.4	16.3
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By  

 Approved By 

TEST REPORT

Ref: Envlab/24-25/TR-14585

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
02.12.2024	45.6	28.6	8.8	13.8
05.12.2024	48.5	30.4	8.6	14.5
09.12.2024	45.7	29.6	8.2	16.6
12.12.2024	46.9	27.2	9.3	17.3
16.12.2024	47.2	28.4	10.2	19.4
19.12.2024	46.8	28.3	10.4	18.7
23.12.2024	46.2	29.1	11.6	17.6
26.12.2024	47.1	27.3	12.7	18.4
30.12.2024	48.9	28.4	9.8	16.5
Monthly Averages	47.0	28.6	10.0	17.0
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012


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TEST REPORT

Ref: Envlab/24-25/TR-13941

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	: Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
04.11.2024	49.5	28.7	18.6	9.6
07.11.2024	46.7	27.1	15.4	14.5
11.11.2024	48.5	28.1	17.5	16.2
14.11.2024	49.2	28.5	16.2	17.4
18.11.2024	50.1	29.1	16.4	18.2
21.11.2024	51.3	29.8	12.9	16.9
25.11.2024	49.7	28.8	15.4	14.3
28.11.2024	52.7	30.6	13.7	12.4
Monthly Averages	49.7	28.8	15.8	14.9
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012





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TEST REPORT

Ref: Envlab/24-25/TR-13942

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	: Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
04.11.2024	46.8	27.1	9.4	9.2
07.11.2024	48.5	28.1	12.4	6.4
11.11.2024	49.5	28.7	13.4	9.4
14.11.2024	46.8	27.1	12.7	12.4
18.11.2024	51.2	29.7	10.6	12.7
21.11.2024	50.5	29.3	14.7	13.4
25.11.2024	49.9	28.9	13.5	11.6
28.11.2024	48.6	28.2	13.2	10.8
Monthly Averages	49.0	28.4	12.5	10.7
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-13943

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	: Koshala 21° 0' 44.4528" N 84° 55' 43.9248" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
04.11.2024	42.9	24.9	17	16.4
07.11.2024	45.6	26.4	15.6	17.2
11.11.2024	43.4	25.2	12.4	19.5
14.11.2024	44.8	26.0	13.5	11.2
18.11.2024	45.7	26.5	13.2	13.4
21.11.2024	46.2	26.8	11	10.8
25.11.2024	46.9	27.2	12.3	16.4
28.11.2024	45.5	26.4	11.4	11.5
Monthly Averages	45.1	26.2	13.3	14.6
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012





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TEST REPORT

Ref: Envlab/24-25/TR-13944

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	: Chhotaberani 20° 57' 14.5728" N 84° 59' 13.0416" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
04.11.2024	45.3	26.3	7.6	12.6
07.11.2024	42.6	24.7	8.4	13.8
11.11.2024	43.5	25.2	10.2	15.4
14.11.2024	44.5	25.8	13.1	17.1
18.11.2024	45.7	26.5	10.4	11.5
21.11.2024	43.6	25.3	9.4	19.2
25.11.2024	46.5	27.0	8.6	14.7
28.11.2024	45.2	26.2	6.9	11.3
Monthly Averages	44.6	25.9	9.3	14.5
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-12281

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	: Raijharana Near Mining Office 20° 57' 48.4992" N 84° 57' 14.5836" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
01.10.2024	48.7	25.8	11.6	10.5
03.10.2024	47.6	29.8	17.5	14.3
07.10.2024	51.6	32.3	14.9	16.8
10.10.2024	50.9	31.8	13.8	17.2
14.10.2024	49.7	31.1	17.3	14.2
17.10.2024	52.7	32.9	15.7	13.9
21.10.2024	52.6	32.9	11.8	18.4
24.10.2024	51.2	32.0	13.3	16.5
28.10.2024	49.9	31.2	11.5	15.7
31.10.2024	50.7	31.7	12.4	14.3
Monthly Averages	50.6	31.1	14.0	15.2
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012


Reviewed By


Approved By

TEST REPORT

Ref: Envlab/24-25/TR-12282

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	:	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

1. Chemical Testing

A. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
01.10.2024	49.6	32.0	15.1	14.9
03.10.2024	52.3	33.7	13.6	15.6
07.10.2024	52.8	34.1	13.2	16.8
10.10.2024	53.6	34.6	10.9	16.2
14.10.2024	82.7	53.3	12.4	15.3
17.10.2024	51.5	33.2	15.7	12.4
21.10.2024	53.6	34.6	13.6	13.7
24.10.2024	53.8	34.7	14.1	12.4
28.10.2024	52.5	33.9	12.6	12.6
31.10.2024	53.7	34.6	14.1	14.8
Monthly Averages	55.6	35.9	13.5	14.5
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012



TEST REPORT

Ref: Envlab/24-25/TR-12283

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	:	Koshal 21° 0' 44.4528" N 84° 55' 43.9248" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
01.10.2024	40.6	24.8	8.9	10.2
03.10.2024	39.5	24.1	9.6	8.9
07.10.2024	37.8	23.1	9.7	11.6
10.10.2024	39.5	24.1	9.3	13.1
14.10.2024	41.2	25.1	9.8	12.4
17.10.2024	40.2	24.5	8.7	12.1
21.10.2024	41.8	25.5	8.2	9.8
24.10.2024	39.8	24.3	8.4	10.7
28.10.2024	38.7	23.6	9.2	10.2
31.10.2024	38.6	23.5	9.1	11.1
Monthly Averages	39.8	24.3	9.1	11.0
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By
P. K. S.

Approved By
P. K. S.

TEST REPORT

Ref: Envlab/24-25/TR-12284

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VC SPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Chhotaberani 20° 57' 14.5728" N 84° 59' 13.0416" E
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VC SPL representative

3. Chemical Testing

C. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)
01.10.2024	36.8	21.8	10.2	10.6
03.10.2024	37.5	22.2	8.7	11.3
07.10.2024	39.4	23.4	9.6	12.9
10.10.2024	40.1	23.8	0.4	10.4
14.10.2024	42.3	25.1	8.3	9.8
17.10.2024	41.8	24.8	10.2	9.1
21.10.2024	40.1	23.8	10.4	8.5
24.10.2024	39.2	23.2	11.1	8.8
28.10.2024	40.3	23.9	9.3	11.2
31.10.2024	38.7	22.9	8.7	10.6
Monthly Averages	39.6	23.5	8.7	10.3
NAAQ Standard	100	60	80	80
Testing method	Gravimetric ISO 5182 (Part-23) RA2019	Gravimetric ISO 5182 (Part-24) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By
P. P. B. S. R.

Approved By
J. P. S. R.

Air Quality Monitoring -Mine Working Area

TEST REPORT

Ref: Envlab/25-26/TR-00688

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air (Work Zone)	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1(WZ)	Sampling Location	: Haul Road
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	Suspended Particulate Matter (SPM) ($\mu\text{g}/\text{m}^3$)	Respirable Particulate Matter (size less than $10\ \mu\text{m}$) (RPM) ($\mu\text{g}/\text{m}^3$)	Sulphur Dioxide (SO_2) ($\mu\text{g}/\text{m}^3$)	Oxide of Nitrogen as NO_2 ($\mu\text{g}/\text{m}^3$)
10.03.2025	272.8	105.4	41.8	33.7
21.03.2025	274.5	108.7	38.9	36.2
Monthly Averages	273.7	107.1	40.4	35.0
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	600/ 24 Hr	300/ 24 Hr	120/ 24 Hr	120/ 24 Hr
As per OSPC Board CTO	500/ 24 Hr	250/ 24 Hr	120/ 24 Hr	120/ 24 Hr
Testing method	Gravimetric IS 5182 (Part-4) RA2019	Gravimetric IS 5182 (Part-23) RA2019	Improved West and Geake method IS 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) IS 5182 (Part-6) RA 2012

Reviewed By



Approved By



TEST REPORT

Ref: Envlab/25-26/TR-00689

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air (Work Zone)	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2(WZ)	Sampling Location	: Coal Stock Yard
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

4. Chemical Testing

D. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	Suspended Particulate Matter (SPM) ($\mu\text{g}/\text{m}^3$)	Respirable Particulate Matter (size less than $10\ \mu\text{m}$) (RPM) ($\mu\text{g}/\text{m}^3$)	Sulphur Dioxide (SO_2) ($\mu\text{g}/\text{m}^3$)	Oxide of Nitrogen as NO_2 ($\mu\text{g}/\text{m}^3$)
10.03.2025	308.8	111.4	48.2	39.2
21.03.2025	305.2	108.8	47.2	41.4
Monthly Averages	307.0	110.1	47.7	40.3
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	600/ 24 Hr	300/ 24 Hr	120/ 24 Hr	120/ 24 Hr
As per OSPC Board CTO	500/ 24 Hr	250/ 24 Hr	120/ 24 Hr	120/ 24 Hr
Testing method	Gravimetric IS 5182 (Part-4) RA2019	Gravimetric IS 5182 (Part-23) RA2019	Improved West and Geake method IS 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) IS 5182 (Part-6) RA 2012

Reviewed By

Approved By



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/25-26/TR-00690

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air (Work Zone)	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3(WZ)	Sampling Location	: Mine Pit Office
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

5. Chemical Testing

E. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	Suspended Particulate Matter (SPM) ($\mu\text{g}/\text{m}^3$)	Respirable Particulate Matter (size less than $10\ \mu\text{m}$) (RPM) ($\mu\text{g}/\text{m}^3$)	Sulphur Dioxide (SO_2) ($\mu\text{g}/\text{m}^3$)	Oxide of Nitrogen as NO_2 ($\mu\text{g}/\text{m}^3$)
10.03.2025	291.6	104.8	42.5	33.8
21.03.2025	282.4	104.2	45.7	35.2
Monthly Averages	287.0	104.5	44.1	34.5
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	600/ 24 Hr	300/ 24 Hr	120/ 24 Hr	120/ 24 Hr
As per OSPC Board CTO	500/ 24 Hr	250/ 24 Hr	120/ 24 Hr	120/ 24 Hr
Testing method	Gravimetric IS 5182 (Part-4) RA2019	Gravimetric IS 5182 (Part-23) RA2019	Improved West and Geake method IS 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) IS 5182 (Part-6) RA 2012

Reviewed By



Approved By



TEST REPORT

Ref: Envlab/24-25/TR-12285

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-5	Sampling Location	: Mine Pit Office
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

2. Chemical Testing

B. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	SPM ($\mu\text{g}/\text{m}^3$)	RPM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
10.10.2024	76.9	52.2	14.2	18.5
21.10.2024	75.3	53.1	14.5	18.2
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	500	250	120	120
NAAQ Standard	--	--	80	80
Testing method	Gravimetric ISO 5182 (Part-4) RA2019	Gravimetric ISO 5182 (Part-23) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By



Approved By



TEST REPORT

Ref: Envlab/24-25/TR-12286

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-6	Sampling Location	: Coal Stock Yard
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

4. Chemical Testing

D. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	SPM ($\mu\text{g}/\text{m}^3$)	RPM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
10.10.2024	77.3	52.8	15.9	19.2
21.10.2024	75.8	53.4	16.2	18.4
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	500	250	120	120
NAAQ Standard	--	--	80	80
Testing method	Gravimetric ISO 5182 (Part-4) RA2019	Gravimetric ISO 5182 (Part-23) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By
P.P.A.
BBSR

Approved By
BBSR

TEST REPORT

Ref: Envlab/24-25/TR-12287

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Air	Sampling Procedure	: VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-7	Sampling Location	: T Point Haul Road
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	: RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	: VCSPL representative

5. Chemical Testing

E. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	SPM ($\mu\text{g}/\text{m}^3$)	RPM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
10.10.2024	73.8	51.7	13.2	12.4
21.10.2024	72.4	52.8	13.7	11.9
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	500	250	120	120
NAAQ Standard	--	--	80	80
Testing method	Gravimetric ISO 5182 (Part-4) RA2019	Gravimetric ISO 5182 (Part-23) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By



Approved By



TEST REPORT

Ref: Envlab/24-25/TR-12288

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-8	Sampling Location	:	Bhalugadia Village
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C Barometric Pressure: 763 mm of Hg	Instrument used for Sampling	:	RDS (APM 460 BL), FPS (APM 550)
Sample Condition	:	Air Tight Sealed and gaseous Sample Solution Refrigerated	Sampling done by	:	VCSPL representative

6. Chemical Testing

F. Atmospheric Pollution

Date of Monitoring	PARAMETERS			
	SPM ($\mu\text{g}/\text{m}^3$)	RPM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO ₂ ($\mu\text{g}/\text{m}^3$)
10.10.2024	67.8	45.7	9.9	11.5
21.10.2024	69.1	43.8	10.1	9.8
As per MoEF & cc Standard Notification No. GSR 742 (E) for Coal mine	500	250	120	120
NAAQ Standard	--	--	80	80
Testing method	Gravimetric ISO 5182 (Part-4) RA2019	Gravimetric ISO 5182 (Part-23) RA2019	Improved West and Geake method ISO 5182 (Part-2) RA 2017	Modified Jacob & Hochheiser (Na-Arsenite) ISO 5182 (Part-6) RA 2012

Reviewed By



Approved By





Noise Monitoring

TEST REPORT

Ref: Envlab/25-26/TR-00692

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	03.03.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	46.7	39.5
2	03.03.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		38.3	32.2
3	03.03.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		51.2	42.7
4	03.03.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		48.6	40.8
Standard as per Noise Rule 2000				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

Reviewed By:



Approved By:





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/25-26/TR-00693

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	17.03.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	45.7	38.9
2	17.03.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		37.9	31.7
3	17.03.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		48.2	40.4
4	17.03.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		48.7	41.6
Standard as per Noise Rule 2000				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.



Reviewed By:



Approved By:

TEST REPORT

Ref: Envlab/24-25/TR-17264

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Noise Level	Sampling Procedure	:	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	02.02.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	46.8	39.3
2	02.02.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		37.2	31.8
3	02.02.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		50.9	42.5
4	02.02.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		48.1	40.3
Standard as per Noise Rule 2000				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.



TEST REPORT

Ref: Envlab/24-25/TR-17265

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Sample Description	:	Ambient Noise Level	Sampling Procedure	:	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	:	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	22.02.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	45.9	38.8
2	22.02.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		37.7	31.5
3	22.02.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		48.6	40.2
4	22.02.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		47.7	41.1
Standard as per Noise Rule 2000				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.


Reviewed By:


Approved By:



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-16432

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	05.01.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	46.2	39.1
2	05.01.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		36.8	32.9
3	05.01.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		51.7	48.4
4	05.01.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		48.3	42.2
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

Reviewed By:



Approved By:





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-16433

Date: 05.02.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	23.01.2025	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	42.4	35.8
2	23.01.2025	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		38.3	31.2
3	23.01.2025	Similisahi 20° 59' 46.365" N 80° 56' 43.005" E		49.9	45.6
4	23.01.2025	Nisa (Highway Side) 20° 55' 51.241" N 84° 59' 34.526" E		56.7	50.1
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

Reviewed By:



Approved By:





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-14587

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	: VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	05.12.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	44.5	39.4
2	05.12.2024	Koshala 21° 0' 44.4528" N 84° 55' 43.9248" E		38.4	34.2
3	05.12.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		42.2	36.9
4	05.12.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		44.6	35.8
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.



Reviewed By:



Approved By:



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-14588

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VC SPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	26.12.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	43.2	38.5
2	26.12.2024	Koshala 21° 0' 44.4528" N 84° 55' 43.9248" E		40.2	34.6
3	26.12.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		40.8	37.6
4	26.12.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		43.2	36.1
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.




Reviewed By:




Approved By:



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-13946

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	: VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	04.11.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	43.8	39.1
2	04.11.2024	Koshala 21° 0' 44.4528" N 84° 55' 43.9248" E		39.6	33.9
3	04.11.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		42.4	37.4
4	04.11.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		44.9	36.5
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

Reviewed By:



Approved By:





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-13947

Date: 05.12.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	: VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	18.11.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	42.8	38.7
2	18.11.2024	Koshala 21° 0' 44.4528" N 84° 55' 43.9248" E		39.2	34.5
3	18.11.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		40.6	38.1
4	18.11.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		43.7	36.4
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.



TEST REPORT

Ref: Envlab/24-25/TR-12290

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	07.10.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	42.7	38.7
2	07.10.2024	Koshal 21° 0' 44.4528" N 84° 55' 43.9248" E		38.9	34.2
3	07.10.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		41.2	37.7
4	07.10.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		43.8	36.3
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

P. Pat
Reviewed By:
BBSR

[Signature]
Approved By:

TEST REPORT

Ref: Envlab/24-25/TR-12291

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul		
Sample Description	:	Ambient Noise Level	Sampling Procedure	IS 9989: 2020
Sample Condition	:	NA	Sampling done by	VCSPL representative

Sl. No.	Date of monitoring	Location	Testing Method	Noise Level in dB(A)	Noise Level in dB(A)
				Day Time	Night Time
1	24.10.2024	Raijharana (Near Mines Office) 20° 57' 48.4992" N 84° 57' 14.5836" E	IS 9989: 2020	42.4	38.8
2	24.10.2024	Koshal 21° 0' 44.4528" N 84° 55' 43.9248" E		38.9	34.6
3	24.10.2024	Tangersahi 20° 57' 41.7096" N 84° 58' 2.4276" E		40.4	37.5
4	24.10.2024	Chhotabereni 20° 57' 14.5728" N 84° 59' 13.0416" E		43.6	36.1
Standard as per Noise Rule 2000 (Residential Area)				75	70

Note: Noise Levels are measured at a distance of 1 m from the operator's head in his usual working posture.

Reviewed By: 


Approved By: 




Waste Water Monitoring -Mine Water, ETP & Other Natural drains

TEST REPORT

Ref: Envlab/25-26/TR-00694

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	25.03.2025	Sample Received on	:	26.03.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-5	Sampling Location	:	ETP Workshop Collection Tank Water 20° 57' 51.534" N 84° 57' 14.1192" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	26.03.2025	Test Completed on	:	29.03.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.15
2.	Suspended solids	mg/l	APHA 2540 D	100.0	96
3.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
4.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	522
5.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	26.2
6.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	232.8

*** End Report***



Reviewed by



Approved by

TEST REPORT

Ref: Envlab/25-26/TR-00695

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	25.03.2025	Sample Received on	:	26.03.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-1	Sampling Location	:	Mine Water after Settling Pond 20° 57' 48.0492" N 84° 57' 36.2088" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	26.03.2025	Test Completed on	:	29.03.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.09
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.2
4.	Suspended solids	mg/l	APHA 2540 D	100.0	84
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	306
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	8.8
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	13.4
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	14.4
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	50
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	2.4
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.02
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.35
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.4
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.2
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.3
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.19
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	0.8
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.5
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:

P. P. Patra

Approved By:

[Signature]

TEST REPORT

Ref: Envlab/25-26/TR-00696

Date: 05.04.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	25.03.2025	Sample Received on	:	26.03.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-2	Sampling Location	:	Mine Sump Water (Before Settling Pond) 20° 57' 48.0492" N 84° 57' 36.2088" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	26.03.2025	Test Completed on	:	29.03.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.04
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.7
4.	Suspended solids	mg/l	APHA 2540 D	100.0	532
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	304
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	13.5
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	8.8
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	134
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	54
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	2.5
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.01
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.35
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.8
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.6
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.4
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.17
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	0.4
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.6
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:
P. P. Patil

Approved By:
A. P. Patil

TEST REPORT

Ref: Envlab/24-25/TR-17272

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-5	Sampling Location	:	ETP Workshop Collection Tank Water 20° 57' 51.534" N 84° 57' 14.1192" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.18
2.	Suspended solids	mg/l	APHA 2540 D	100.0	98
3.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
4.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	516
5.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	26.4
6.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	240.2

*** End Report***


Reviewed by


Approved by

TEST REPORT

Ref: Envlab/24-25/TR-17273

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-1	Sampling Location	:	Mine Water after Settling Pond 20° 57' 48.0492" N 84° 57' 36.2088" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.06
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.2
4.	Suspended solids	mg/l	APHA 2540 D	100.0	86
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	314
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	8.8
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	13.3
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	14.5
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	50
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	2.6
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.02
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.31
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.5
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.4
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.2
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.18
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	0.6
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.3
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

P. P. S.
Reviewed By:

P. P. S.
Approved By:

TEST REPORT

Ref: Envlab/24-25/TR-17274

Date: 05.03.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	03.02.2025	Sample Received on	:	04.02.2025
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-2	Sampling Location	:	Mine Water 20° 57' 48.0492" N 84° 57' 36.2088" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	04.02.2025	Test Completed on	:	10.02.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.05
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.4
4.	Suspended solids	mg/l	APHA 2540 D	100.0	548
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	304
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	13.2
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	8.6
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	13.8
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	54
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	2.8
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.01
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.32
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.5
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.6
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.2
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.15
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	0.4
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.5
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By: 

Approved By: 



Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 (OH&S), ISO/IEC 17025:2017 Certified

TEST REPORT

Ref: Envlab/24-25/TR-14589

Date: 05.01.2025

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	30.12.2024	Sample Received on	:	31.12.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-5	Sampling Location	:	ETP Workshop Collection Tank Water 20° 57' 51.534" N 84° 57' 14.1192" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	31.12.2024	Test Completed on	:	05.01.2025

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.12
2.	Suspended solids	mg/l	APHA 2540 D	100.0	94
3.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
4.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	508
5.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	28.4
6.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	234.2

*** End Report***


Reviewed By: 


Approved By: 

TEST REPORT

Ref: Envlab/24-25/TR-12292

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	22.10.2024	Sample Received on	:	23.10.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-1	Sampling Location	:	Mine Water after Settling Pond 20° 57' 48.0492" N 84° 57' 36.2088" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	23.10.2024	Test Completed on	:	29.10.2024

A. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.04
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.6
4.	Suspended solids	mg/l	APHA 2540 D	100.0	88
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	302
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	13.4
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	8.7
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	14.6
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	52
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	2.9
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.02
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.34
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.6
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.7
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.3
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.19
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	0.5
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.2
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:



Approved By:



TEST REPORT

Ref: Envlab/24-25/TR-12293

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	22.10.2024	Sample Received on	:	23.10.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-2	Sampling Location	:	Natural Nala (Golagadia) 20° 57' 52.6896" N 84° 57' 49.32" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	23.10.2024	Test Completed on	:	29.10.2024

B. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	7.71
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.5
4.	Suspended solids	mg/l	APHA 2540 D	100.0	96
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	452
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	15.2
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	9.2
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	16.9
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	60
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	<5.0
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.01
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.32
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.3
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.1
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.2
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.18
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	<0.05
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	1.0
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:



Approved By:



TEST REPORT

Ref: Envlab/24-25/TR-12294

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	22.10.2024	Sample Received on	:	23.10.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-3	Sampling Location	:	Natural Nala (Raijharana) 20° 57' 51.9696" N 84° 57' 49.32" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	23.10.2024	Test Completed on	:	29.10.2024

C. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	7.93
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.6
4.	Suspended solids	mg/l	APHA 2540 D	100.0	74
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	328
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	14.4
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	8.9
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	15.2
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	58
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	<5.0
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.01
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.2
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	1.01
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	2.6
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	BDL (<0.01)
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	0.2
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.2
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	<0.05
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	0.8
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:



Approved By:



TEST REPORT

Ref: Envlab/24-25/TR-12295

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	22.10.2024	Sample Received on	:	23.10.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-4	Sampling Location	:	Singhadajoda Nala 20° 58' 30.1548" N 84° 57' 39.2508" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	23.10.2024	Test Completed on	:	29.10.2024

D. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	Colour	Hazen	APHA 2120 B	--	<5.0
2.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.02
3.	Temperature	°C	APHA 2550 B	Shall not exceed 5°C above the receiving water Temp	27.7
4.	Suspended solids	mg/l	APHA 2540 D	100.0	844
5.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
6.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	82
7.	Total Residual Chlorine (as RFC)	mg/l	APHA 4500 Cl ⁻ B	1.0	ND
8.	Ammonical Nitrogen (as NH ₃ -N)	mg/l	APHA 4500 NH ₃ F	50.0	14.1
9.	Total Kjeldahl Nitrogen (as N)	mg/l	APHA 4500 N _{org} B	100.0	8.6
10.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	15.0
11.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	55
12.	Nitrate Nitrogen (as N)	mg/l	APHA:4500 NO ₃ ⁻ B	10.0	<5.0
13.	Hexavalent chromium (as Cr ⁺⁶)	mg/l	APHA 3500Cr B	0.1	0.01
14.	Sulphide (as S)	mg/l	APHA 4500 S ²⁻ D	2.0	BDL (<1.0)
15.	Phenolic compounds (as C ₆ H ₅ OH)	mg/l	APHA 5530 B,D	1.0	0.15
16.	Cyanide (as CN)	mg/l	APHA 4500 CN ⁻ C,D	0.2	BDL (<0.02)
17.	Fluoride (as F)	mg/l	APHA 4500 F C	2.0	0.73
18.	Dissolved phosphates (as P)	mg/l	APHA 4500 P,D	5.0	1.86
19.	Arsenic(as As)	mg/l	APHA 3114 B	0.2	BDL (<0.004)
20.	Mercury (As Hg)	mg/l	APHA 3500 Hg	0.01	BDL (<0.004)
21.	Lead (as Pb)	mg/l	APHA 3111 B,C	0.1	BDL (<0.01)
22.	Cadmium (as Cd)	mg/l	APHA 3111 B,C	2.0	0.18
23.	Total chromium (as Cr)	mg/l	APHA 3111 B	2.0	<0.1
24.	Copper (as Cu)	mg/l	APHA 3111 B,C	3.0	BDL (<0.02)
25.	Zinc (as Zn)	mg/l	APHA 3111 B,C	5.0	0.04
26.	Selenium (as Se)	mg/l	APHA 3114 B	0.05	BDL (<0.001)
27.	Nickel (as Ni)	mg/l	APHA 3111 B	3.0	BDL (<0.05)
28.	Manganese (as Mn)	mg/l	APHA 3500Mn B	2.0	<0.05
29.	Iron (as Fe)	mg/l	APHA 3500Fe B	3.0	0.94
30.	Vanadium (as V)	mg/l	APHA 3500V B	0.2	BDL (<0.2)

*** End Report***

Reviewed By:



Approved By:



TEST REPORT

Ref: Envlab/24-25/TR-12296

Date: 05.11.2023

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	22.10.2024	Sample Received on	:	23.10.2024
Sample Description	:	Waste Water	Sampling Procedure	:	As per IS 3025
Identification by Customer	:	WW-5	Sampling Location	:	ETP Workshop Collection Tank Water 20° 57' 51.534" N 84° 57' 14.1192" E
Sample Condition	:	Ice Preserved	Sampling done by	:	VCSPL Representative
Test Started on	:	23.10.2024	Test Completed on	:	29.10.2024

E. Pollution & environment

Sl. No	Parameter	Unit	Testing Methods	Schedule -VI General Standard for Discharge of Environmental Pollutants (Inland Surface Water)	Analysis Results
1.	pH Value (at 25 °C)	--	APHA 4500H ⁺ B	5.5-9.0	8.01
2.	Suspended solids	mg/l	APHA 2540 D	100.0	96
3.	Oil and grease	mg/l	APHA 5520 B	10.0	<5.0
4.	Total Dissolved Solids	mg/l	APHA 2540 C	2100.0	524
5.	Biochemical Oxygen Demand (3 days @ 27°C)	mg/l	APHA 5210 B	30.0	327
6.	Chemical Oxygen Demand	mg/l	APHA 5220 C	250.0	975

*** End Report***

Reviewed By:



Approved By:





Heavy Metal Monitoring TEST REPORT

Ref: Envlab/24-25/TR-17275

Date: 05.03.2028

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	10.02.2025	Date of Receiving	:	11.02.2025
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-1	Sampling Location	:	Raijharana Near Mining Office Latitude : 20.96347234° Longitude: 84.95405081°
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C	Instrument used for Sampling	:	RDS (APM 460 BL)
Sample Condition	:	Air Tight Sealed Pouch	Sampling done by	:	VCSPL representative
Test Started on	:	11.02.2025	Test Completed on	:	15.02.2025

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	NAAQS Limit	Analysis Result
1	Lead as Pb	($\mu\text{g}/\text{m}^3$)	IS 5182(Part -22):2019	1	0.019
2	Nickel as Ni	(ng/m^3)	IS 5182(Part -26):2020	20	12.55
3	Arsenic as As	(ng/m^3)	EPA Method IO-3.5	6	<0.05
4	Mercury as Hg	($\mu\text{g}/\text{m}^3$)	EPA Method IO-3.5	--	<0.001
5	Cadmium as Cd	($\mu\text{g}/\text{m}^3$)	EPA Method IO-3.5	--	<0.05
6	Chromium as Cr	($\mu\text{g}/\text{m}^3$)	EPA Method IO-3.5	--	<0.05

*** End Report***





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/24-25/TR-17276

Date: 05.03.2028

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	10.02.2025	Date of Receiving	:	11.02.2025
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-2	Sampling Location	:	Tangersahi Latitude : 20.96158629° Longitude: 84.9673415°
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C	Instrument used for Sampling	:	RDS (APM 460 BL)
Sample Condition	:	Air Tight Sealed Pouch	Sampling done by	:	VCSPL representative
Test Started on	:	11.02.2025	Test Completed on	:	15.02.2025

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	NAAQS Limit	Analysis Result
1	Lead as Pb	(µg/m ³)	IS 5182(Part -22):2019	1	0.022
2	Nickel as Ni	(ng/m ³)	IS 5182(Part -26):2020	20	16.18
3	Arsenic as As	(ng/m ³)	EPA Method IO-3.5	6	0.076
4	Mercury as Hg	(µg/m ³)	EPA Method IO-3.5	--	<0.001
5	Cadmium as Cd	(µg/m ³)	EPA Method IO-3.5	--	<0.05
6	Chromium as Cr	(µg/m ³)	EPA Method IO-3.5	--	<0.05

*** End Report***





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/24-25/TR-17277

Date: 05.03.2028

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	10.02.2025	Date of Receiving	:	11.02.2025
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSPL/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-3	Sampling Location	:	Koshal Latitude : 21.0123484° Longitude: 84.92886774°
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C	Instrument used for Sampling	:	RDS (APM 460 BL)
Sample Condition	:	Air Tight Sealed Pouch	Sampling done by	:	VCSPL representative
Test Started on	:	11.02.2025	Test Completed on	:	15.02.2025

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	NAAQS Limit	Analysis Result
1	Lead as Pb	(µg/m ³)	IS 5182(Part -22):2019	1	0.029
2	Nickel as Ni	(ng/m ³)	IS 5182(Part -26):2020	20	12.66
3	Arsenic as As	(ng/m ³)	EPA Method IO-3.5	6	0.081
4	Mercury as Hg	(µg/m ³)	EPA Method IO-3.5	--	<0.001
5	Cadmium as Cd	(µg/m ³)	EPA Method IO-3.5	--	<0.05
6	Chromium as Cr	(µg/m ³)	EPA Method IO-3.5	--	<0.05

*** End Report***





Visiontek Consultancy Services Pvt. Ltd.

(Committed For Better Environment)

TEST REPORT

Ref: Envlab/24-25/TR-17278

Date: 05.03.2028

Name & Address of the Customer	:	M/s Jindal Steel & Power Ltd, Angul, Odisha. Utkal C Coal Mine, Talcher, Angul			
Date of Sampling	:	10.02.2025	Date of Receiving	:	11.02.2025
Sample Description	:	Ambient Air	Sampling Procedure	:	VCSP/L/F-SOP/001, Dt.04.09.2021
Identification by Customer	:	AAQMS-4	Sampling Location	:	Chhotaberani Latitude : 20.95404765° Longitude: 84.98695589°
Environment Condition during Sampling	:	Atmospheric Temp.: 27 – 39°C	Instrument used for Sampling	:	RDS (APM 460 BL)
Sample Condition	:	Air Tight Sealed Pouch	Sampling done by	:	VCSP/L representative
Test Started on	:	11.02.2025	Test Completed on	:	15.02.2025

1. Chemical Testing

A. Atmospheric Pollution

Sl. No	Parameters	Unit	Test Method	NAAQS Limit	Analysis Result
1	Lead as Pb	(µg/m ³)	IS 5182(Part -22):2019	1	0.022
2	Nickel as Ni	(ng/m ³)	IS 5182(Part -26):2020	20	9.02
3	Arsenic as As	(ng/m ³)	EPA Method IO-3.5	6	<0.05
4	Mercury as Hg	(µg/m ³)	EPA Method IO-3.5	--	<0.001
5	Cadmium as Cd	(µg/m ³)	EPA Method IO-3.5	--	<0.05
6	Chromium as Cr	(µg/m ³)	EPA Method IO-3.5	--	<0.05

*** End Report***

