

KORP RESOURCES PVT. LTD.

ONKAR MINES



H. O. : 161, Rabindra Sarani, Kolkata - 700 007
Phone : 033-2269-0895/9196
Fax : 033-2658-2376/2268-3832
E-mail : onkargroup@hotmail.com
korpresources@gmail.com

Post : Tensa,
Dist : SUNDARGARH
(ORISSA)
Phone : 06625236305
CIN : U51500WB1994PTC063921

Ref no- KRPL/ MoEF/434/24.

Date 13.05 2024

To
The Regional Officer,
Ministry of Environment and Forest,
Eastern Regional Office,
Chandrasekharapur, Bhubaneswar, 751023.

Sub:- Half yearly compliance on status of environmental clearance conditions of M/s Korp Resources Pvt Ltd. For the period from Oct 2023 to March 2024.

Sir,

In compliance to the conditions stipulated in grant of environmental Clearance 9MoEF letter no- J-11015/1008/2007-IA II(M) dated 4.6.2009. Tantra Iron Ore Mine of M/s Korp Resources Pvt Ltd at Tensa Dist Sundergarh Odisha is submitting the Half yearly compliance on status of environmental clearance conditions for the period from Oct 2023 to March 2024. We have uploaded the compliance in website and also submitted in mail. We are enclosing the monitoring report and photographs and documents in support of compliances attended during the period.

Submitted for kind information.

Thanking You.

Yours Faithfully.
For Tantra Iron Ore Mines,
M/s Korp Resources Pvt Ltd


GENERAL MANAGER
Tantra Iron Ore Mines
Korp Resources Pvt. Ltd.
Tensa, Odisha-751042

General Manager

Encl- 1. Status of compliance report.
2. Monitoring report for 6 months Oct 2023 to March 2024

HALF YEARLY COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS
OF M/S. KORP RESOURCES PRIVATE LIMITED FOR THE PERIOD
FROM OCTOBER 2023 TO MARCH 2024.
(Ref: MoEF Letter No. J-11015/1008/2007-IA.II (M) dated 04.06.2009)

Specific Conditions:																																				
Sl. No.	Description	Compliance Status																																		
1	Environmental clearance is accorded for production capacity of 1,20,000TPA (0.12million TPA) of iron ore only	EC was obtained on 04.06.2009 Letter No-(J-11015/1008/2007-IA,II(M) and production thereafter are as follows: <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2009-10</td> <td>0.00</td> <td>2017-18</td> <td>106200</td> </tr> <tr> <td>2010-11</td> <td>116557</td> <td>2018-19</td> <td>118700</td> </tr> <tr> <td>2011-12</td> <td>16800</td> <td>2019-20</td> <td>117500</td> </tr> <tr> <td>2012-13</td> <td>78230</td> <td>2020-21</td> <td>119100</td> </tr> <tr> <td>2013-14</td> <td>119800</td> <td>2021-22</td> <td>117200</td> </tr> <tr> <td>2014-15</td> <td>114000</td> <td>2022-23</td> <td>119700</td> </tr> <tr> <td>2015-16</td> <td>115600</td> <td>2023-24</td> <td>118700</td> </tr> <tr> <td>2016-17</td> <td>119300</td> <td></td> <td></td> </tr> </table>			2009-10	0.00	2017-18	106200	2010-11	116557	2018-19	118700	2011-12	16800	2019-20	117500	2012-13	78230	2020-21	119100	2013-14	119800	2021-22	117200	2014-15	114000	2022-23	119700	2015-16	115600	2023-24	118700	2016-17	119300		
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ii.	All the conditions stipulated by the State Pollution Control Board, Odisha in their Consent to Establish shall be effectively implemented.	All the stipulations of CTE has been complied. .																																		
iii.	Necessary Forestry clearance under the Forest (Conservation) Act, 1980 for an area of 72.419ha forest land shall be obtained before starting mining operation in that area. No mining shall be undertaken in the forest area without obtaining requisite prior forestry clearance. The environmental clearance is subject to grant of forestry clearance.	Forest clearance as per FC act has been granted vide letter. No-F N0108/2000 FC Dated-14.6.2010																																		
iv.	The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydrogeological study shall be, carried out.	As the water table is 192 Mtr below the deepest mine working to be reached at conceptual, stage, so there will be no intersection / effect of mine working on ground water table. All operations of mines including mine excavation is restricted to above ground water table.																																		
v.	The project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken for protection of Samij Nallah and also while diverting any seasonal channels originating from the mine lease, if any, during the course of mining operation.	According to the hydrological study done there is no perennial natural water course or resource in the ML area. Adequate steps taken by making check dams to prevent flow of sediment downstream. check dams in each seasonal water course is done. Settling tanks of adequate size is made along the water course.																																		
vi.	The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept	There is no generation of top soil.As per mining scheme there is no generation of																																		

	<p>unutilized for long. The topsoil shall be used for land reclamation and plantation.</p>	<p>top soil. In course of mining any soft material suitable for use in plantation is recovered, it is used in plantation purpose simultaneously.</p>
vii.	<p>The over burden (OB) generated during the mining operation shall be stacked in the earmarked area only and it should not be kept active for a long period of time and its phase-wise stabilization shall be carried out. There shall be one external over burden dump, the maximum height of the dump shall not exceed 10 m and the over all slope of the dump shall be maintained to 27°. The OB dump should be scientifically vegetated with suitable native species to prevent erosion and surface run off. In critical areas use of geo-textiles shall be undertaken for stabilization of the dump. Backfilling shall start from the year 2018 onwards and shall be completed by 2023. The backfilled area shall be afforested. Monitoring and management of rehabilitated areas should continue until the vegetation, becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.</p>	<p>OB generated is stacked in the area specified for dumping as per approved mining plan. Height of each step of the dump is kept 6-8 Mtr with proper width, so the average angle of slope is about 23° to 24° . There is one old dump with subgrade material plantation iihas been done in the foot region to prevent wash of materials to down stream by rain water. Local species like Simarua, Chakunda are planted, the best survival species of the region. As the dump is active no part of the dump is matured for fixing of Geotextile. Terracing of the dump is made to avoid erosion by surface runoff.</p> <ul style="list-style-type: none"> • There was provision for back filling in earlier, scheme 2009-14, Occurrence of ore proved by subsequent prospecting and in present scheme approved upto March 2028 there is no provision for back filling.
viii.	<p>Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dumps to prevent run off of water and flow of sediments directly into the Karo River, the Kuradih River, the Samij Nallah and other water bodies. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de-silted, particularly after the monsoon, and maintained properly. Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and the over burden dump to prevent run off of water and flow of sediments directly into the Karo River, the Kuradih River, the Samij Nallah and other water bodies and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of the silt material. Sedimentation pits shall be constructed at the corners of the garland drains and desilted at regular intervals.</p>	<ul style="list-style-type: none"> • The garland drains have been. Properly sloped, deepened and widened. • Pits of suitable size has been developed along to garland drains and in corners. • Hume pipes have been provided in road crossing. • Water is channelized / discharged through settling tank to retain the silt, so that clear water finally enters the SamijNala • The capacity of two settling tanks is of 3000 m³, Each which can meet the requirement of maintaining proper water body to facilitate settling of sediments. • Besides two cemented settling tanks of size 20m X 15m X 2m (Avq.) 1200 m³ have been made scientifically with de- silting arrangement by which clear water will be recovered & used for plantation and other non-domestic purposes & balance silt free water will be discharged to the water course. These tanks also used for storing water collected by rain water harvesting • The sedimentation pond is de-silted regularly. Care is being taken to discharge sediment free clear water from the lease area. Two settling tanks having sufficient

		<p>capacity is made so as the meet sudden rain fall and peak rain fall of the area. The sump capacity allows proper retention time which allows proper settling of sediments.</p> <ul style="list-style-type: none"> • Sedimentation pits have been made in course and corner points of garland drains to prevent flow of sediment downstream and desilted regularly.
ix.	Dimension of the retaining wall at the toe of the over burden dump and the over burden benches within the mine to check, run-off and siltation shall be based on the rainfall data.	Retaining walls are made at the tow of the dump, and in each terrace of OB dump of suitable dimension to check runoff and siltation. Cemented Stone protection wall made at the base of the OB dump to prevent flow of soft materials from OB benches.
x.	Plantation shall be raised in an area of 31 ha including 7.5m wide green belt in the safety zone around the mining lease, over burden dump, backfilled and reclaimed area, mine benches, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per hectare.	Safety zone of 3.378 hact. covered by Plantation with 9365 Nos of trees. Besides plantation also done in parking area (Plot No1-450 Nos) , non mineralized area Plot - 1 3650 Nos, Plot No-3- 2225 Nos), base region of the dumps 2100, Avenue1078 Nos have been done covering 2.872, total 6.25 hectares have been done. Total 17340 No of trees have been planted. Infilling plantation is also done every year to maintain tree density of 2500 /Ha . as per report. Native species like Simarua, Neem, Chakunda planted.
xi.	Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as around crushing and screening plant, loading and unloading point and transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.	<p>•Effective & regular water sprinkling is being done in critical areas. Regular monitoring of ambient air quality is being done which confirms to norms prescribed by the Central Pollution Control Board.</p> <p>• Environmental Monitoring Report for the period Oct 23 to March 24 is submitted.</p> <p>It is seen that all the parameters are within limit.</p>
xii.	Regular monitoring of water quality upstream and downstream of the Samij Nallah shall be carried out and record of monitored data should be maintained and submitted to the Ministry of Environment and Forests, its Regional Office, Bhubneswar, the Central Groundwater Authority, the Regional Director, Central Ground Water Board, the State Pollution Control Board and the Central Pollution Control Board	Monitoring of the water quality of upstream and down-stream of Samij Nala and submitted to concerned authorities. (Ref monitoring report.)

xiii.	The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.	<ul style="list-style-type: none"> • A hydrological study have been done and submitted to DOWR, Govt. Odisha. • Regional Director, Central Ground Water Board was consulted and steps have been taken for rain water harvesting and ground water recharge.
xiv.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers in and around the mining lease during the mining operation. The periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season) shall be carried out in consultation with the State. Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional. Office Bhubneswar, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.	<ul style="list-style-type: none"> • The ground water level and quality have studied by 6 Nos. of existing wells both in and around the ML area. • Periodic monitoring is being done and monitoring data submitted. • As per the records and date-collected from SGWA & CGWA the water level is not depleting in this region.
xv.	The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water, if any) required for the project.	Present requirement of water is 25 KI par day. For dust suppression, plantation it is about 5 to 8 cum per day which is met from rain water harvesting system. Rain harvest water is stored in large concrete tanks of 30 Mtr X 50 Mtr having depth 4 to 5 mtr is made in the lease area nearer to mineral processing plant (Crushing , Screening & stacking) For drinking and other uses water of borewell done inside the lease area to be used. NOC obtained from CGWA for drawal of water upto 35 KI par day.
xvi.	Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.	<ul style="list-style-type: none"> • A rain water conservation plan is already made and included in the Final EIA/ EMP Report. • Accordingly we have taken up the work of preparing small check dams to control the flow of rain water with boulder beds along the sloping ground which will help for arresting water. • Check dams has been made in the gutter in MI area which will help both in conservation and augmentation of ground water source. • Rain water harvesting project have been done planned for collection and use iof rain water.

xvii.	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	<ul style="list-style-type: none"> •Regular monitoring of the vehicle emissions is being done and the status of the vehicle maintenance is being done by our mechanical engineer of mine. •Before weighment and issue of gate pass covering of the trucks are ensured. •No over loading is done also it is checked online by Dept. of Mines, Odisha Govt. •Vehicle emission monitoring report are enclosed.
xviii	No transportation of ore outside the mine lease area shall be carried out after the sunset.	Work done during general shift only in day light hours.
xix.	No blasting shall be carried out after the sunset Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Blasting is being carried out only in day time. Controlled blasting permission have been taken from DGMS and blasting is done accordingly. Also study has been done by NIT for fly rock and Ground vibration and blast design suggested is followed.
xx.	Drills shall either be operated with dust extractors or equipped with water injection system.	DTH drill machine with water injection system is used for blast hole drilling at mines.
xxi.	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.	<ul style="list-style-type: none"> • Water sprinkling in vulnerable points has been made for effective dust suppression. • Loading and unloading areas efficient dust control arrangements like water sprinkling done with online sprinklers. •Spinklers are provided in all transfer points.
xxii.	Consent to operate shall be obtained from the State Pollution Control Board, Odisha prior to start of enhanced production from the mine.	Consent from OSPCB will be obtained after grant of EC. Presently CTO is obtained for 1.2 lakh tones production per year.
xxiii	Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.	There is no colony in ML area and no accommodation have provide inside the mine. Mine is worked in daylight hours in general shift only. There are about 37 employees in mine. Swerage management is done by soak pits. ETP has been provided for waste water generated from mines and workshop.
xxiv	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Initial Pre-placement and periodical medical examination in 3/ 5 years interval by DGMS approved Doctors and examinations reports are submitted to DGMS and other authorities. Besides regular medical checkup camps are organized by management.
xxv	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary	The total staff and operatives & labors of the mines is about 37 nos regular and about 25-30 contractual who are staying in nearby vii/age / settlement. Work is done in general shift in day light hours only. No house is required to be provided within ML area.

	structures to be removed after the completion of the project.	
xxvi	The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely leopard, bear, elephant etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State-Forest and Wildlife Department. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to this project site shall be effectively implemented. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.	A Site-specific Wild Life Management Plan has been prepared and has been approved by Chief Conservator of Forest (CCF) Wild Life. Conservation measures has been implemented as per the study and recommendation made thereof. Required funds has been deposited to forest department.
xxvi i	The critical parameters such as SPM, RSPM, NOx in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored (TDS, DO, PH, Total Suspended Solids (TSS) and Cr6). The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location in public domain. The circular No. J-20012/1/2006-1A.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.	<ul style="list-style-type: none"> • The parameters like SPM, RSPM (PM10), NOx & PPV at a distance of 300m is monitored periodically. • The parameters like TDS, DO, pH, TSS & Cr⁶ of discharge water are being monitored and the results are displayed at the main gate. • The monitored data have been uploaded on the website (https://www.korpresources.in) of the company as well as displayed on a display board at the project site in main gate which is well seen by public.
xxvi ii	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	The present plan is approved for 5 years which is effective for the period April 2023 to Mar 2028, with progressive mine closure plan. The life of the mine is more than 5 years. Final mine closer plan can be before 5 years of mine closure.
B. General Conditions:		
i.	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.	No change in mining technology and scope of working is done. All operation are carried out as per scope of work approved by MoEF limiting the work upto 1,20,000 Tons per year.

ii.	No change in the calendar plan including excavation, quantum of mineral iron ore and the waste shall be made.	Work is done as per the stipulations of present EC limiting the production to 1,20,000 Tons and handling of waste.
iii.	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone .for RSPM, SPM, SO ₂ &NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Four monitoring stations have been set-up in core zone and Four in buffer zone. Monitoring of RSPM (PM ₁₀), SPM, SO ₂ &NO _x is being done monthly in consultation with OSPCB and reports are submitted to OSPCB regularly.
iv.	Data on ambient air quality (RSPM, SPM, SO ₂ &NO _x) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.	Monitoring of RSPM (PM ₁₀), SPM, SO ₂ &NO _x is being done monthly and reports are submitted to the Ministry, OSPCB, CPCB& ROIOSPCB regularly.
v	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading, unloading and at transfer points should be provided and properly maintained.	<ul style="list-style-type: none"> •To control fugitive dust, all measures like water sprinkling haul road and in all vulnerable points is done regularly with proper road maintenance for effective dust control. Water spraying is done by mobile water tanker as well as by sprinklers fitted in pipeline. Loading point like feed hopper, unloading points and stacking points, transfer points are fitted with suitable sprinklers so as to keep the material moist and to keep the dust concentration level under control.
vi.	Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. should be provided with ear plugs / muffs.	Proper maintenance of the equipment's are being done for control of noise, Noise level in all working places is being monitored. Workers have been provided with ear plugs wherever necessary. Work is done in general shipt only, no night operation done. HEMM of lower capacity are used the noise level of which is much below the permissible limit.
vii.	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. Oil and grease trap should be installed before discharge of workshop effluents.	There is no woprkshop or maintenance is done inside the MI area. Whatever Oil & Grease cotton waste or any such material is used are kept properly stores and disposed. So no no trap for treatment of waste water of workshop has been provided. There is no waste water from mines except rainy season which is discharged through settling tank and monitored.

viii.	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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	Health surveillance programs are being conducted and the personnel working in dusty area have been properly trained and provided with protective equipment's.																																
ix.	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 Organization.	An environment Management Cell has been created consisting of Mines manager, Geologist, Mechanical engineer, 'Mines foreman, Mining Mate, supervisor, 2 attendants / field man.																																
x.	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 the Ministry and its Regional Office located at Bhubaneswar.	<p>Separate fund allotment has been done and kept for this purpose only. The yearly expenses made are as follows: Rupees in Lakhs</p> <table border="1" data-bbox="932 835 1422 1128"> <tr> <td>2009 -10</td> <td>12</td> <td>2017-18</td> <td>12</td> </tr> <tr> <td>2010-11</td> <td>14</td> <td>2018-19</td> <td>14</td> </tr> <tr> <td>2011 -12</td> <td>15</td> <td>2019-20</td> <td>30</td> </tr> <tr> <td>2012-13</td> <td>21</td> <td>2020-21</td> <td>26</td> </tr> <tr> <td>2013 -14</td> <td>20</td> <td>2021-22</td> <td>35</td> </tr> <tr> <td>2014-15</td> <td>18</td> <td>2022-23</td> <td>32</td> </tr> <tr> <td>2015-16</td> <td>20</td> <td>2023-24</td> <td>30</td> </tr> <tr> <td>2016-17</td> <td>22</td> <td></td> <td></td> </tr> </table>	2009 -10	12	2017-18	12	2010-11	14	2018-19	14	2011 -12	15	2019-20	30	2012-13	21	2020-21	26	2013 -14	20	2021-22	35	2014-15	18	2022-23	32	2015-16	20	2023-24	30	2016-17	22		
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xi.	The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	Date of financial closures - 31 st March Date of final approval of the project- 1 st April 2009 for enhancement of production to 1,20,000 Tons per year. The mine was in operation prior to 2009 and land development made earlier which have been intimated to SPCB..																																
xii.	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data I information / monitoring reports.	OSPCB regional office is regularly examining compliance status every year before renewal of CTO for the next year. Also visits site and verify the details of compliances at site in different seasons.																																
xiii.	The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment clearance conditions on their website and, update the same periodically and simultaneously send the same bye-mail to the Regional Office, Ministry of Environment and Forests, Bhubneswar.	One web site of company opened and data are updated (https://www.korpresources.in)																																

xiv	A copy of clearance letter will be marked to concerned Panchayat/ local NGO, if any, from whom suggestion /representation has been received while processing the proposal. The clearance letter shall also be put on the web site of the company.	After obtaining EC copy of the grant order was provided to local panchayat, local reporters of news papers. Public hearing details and suggestions have been placed in web site.
xv.	The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office, Tehsildar's Office for 30 days.	We had submitted letters to DIC, OSPCCB, Dist collector, Tahasildar and DFO enclosing copy of EC with request to place in notice board.
xvi	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue 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 also at website of the Ministry of Environment and Forests at http://envfor.nic.in and a copy of the same should be forwarded to the Regional Office of this Ministry located Bhubaneswar.	The clearance letter was published in Odia daily news papers ie Samaj, Dharitri .

Encl- Monitoring reports for the period Oct 23 to March 2024..

Tantra Iron Ore Mines,
Korp Resources Pvt Ltd


GENERAL MANAGER
Tantra Iron Ore Mines
Korp Resources Pvt. Ltd.
Tenda, Odisha-770042



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/901

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.10.2023

DATE OF TEST COMMENCEMENT

: 03.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/922

Sample Identification /Locations

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.10.2023	47.8	31.2	8.4	11.1	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.10.2023	53.4	32.5	7.3	12.2	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.10.2023	47.4	34.2	8.0	11.9	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.10.2023	47.1	33.5	8.5	12.2	0.45	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.10.2023	45.8	32.9	7.6	10.8	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.10.2023	50.4	31.3	7.3	11.2	0.43	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.10.2023	52.4	32.3	8.5	11.5	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
28.10.2023	53.4	31.5	7.4	11.6	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	49.71	32.64	7.91	11.60	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/902

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.10.2023

DATE OF TEST COMMENCEMENT

: 03.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/923

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.10.2023	50.3	35.8	9.7	15.3	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.10.2023	51.6	34.6	10.6	13.6	0.29	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.10.2023	52.2	34.7	10.4	13.2	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.10.2023	49.3	35.9	9.5	13.3	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.10.2023	51.3	37	9.6	13.8	0.29	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.10.2023	50.8	34.7	9.7	14.8	0.22	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.10.2023	51	34.5	10.2	14.7	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
28.10.2023	52.3	35.6	10.3	14.7	0.30	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	51.13	35.04	10.02	14.20	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/903

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.10.2023

DATE OF TEST COMMENCEMENT

: 03.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/924

Sample Identification /Locations

Near Tensa Township

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.10.2023	45.2	26.2	6.5	10.5	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.10.2023	44.8	25.1	6.4	10.2	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.10.2023	44.2	26.6	6.4	12.5	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.10.2023	45.5	26.3	6.2	13.2	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.10.2023	45.6	26.2	6.3	12	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.10.2023	44.5	26.5	6.4	12	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.10.2023	43.9	25.1	6.2	10.2	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
28.10.2023	45.8	27.2	6.6	12.8	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	44.90	26.20	6.42	11.73	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/904

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.10.2023

DATE OF TEST COMMENCEMENT

: 03.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/925

Sample Identification /Locations

Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.10.2023	36.6	23.7	6.9	12.4	0.15	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.10.2023	35.3	22.8	6.8	12	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.10.2023	37.4	22.2	6.4	10.7	0.12	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.10.2023	37.8	24.6	6	9.7	0.14	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.10.2023	39.4	25.5	6.2	11.6	0.11	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.10.2023	37.4	28.9	6.9	11.5	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.10.2023	33.4	29.4	6.5	10.3	0.17	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
28.10.2023	37.4	28.1	6.4	10.1	0.16	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	36.81	25.72	6.51	11.00	0.15	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/905 DT-03.11.2023
DISCIPLINE : Chemical Testing, Atmospheric Pollution.
NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
NAME OF PROJECT/WORK : ----
REFERENCE NO. : KRPL/ENV/22-23-391 Dt- 26.03.2023
TYPE OF SAMPLE : Ambient Air Fugitive Dust Sample
SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
CONDITION OF SAMPLE : Sealed
TYPE OF TEST : Physical & Chemical Parameters
DATE OF SAMPLE RECEIVED : 05.10.2023
DATE OF TEST COMMENCEMENT : 05.10.2023
DATE OF COMPLETION : 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/926

Sample Identification /Locations

Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.10.2023	427
2.	07.10.2023	374
3.	11.10.2023	366
4.	14.10.2023	417
5.	17.10.2023	335
6.	21.10.2023	430
7.	25.10.2023	425
8.	29.10.2023	517
Monthly Average		411.37
Standard		1200

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/906

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.10.2023

DATE OF TEST COMMENCEMENT

: 05.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/927

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.10.2023	368
2.	07.10.2023	335
3.	11.10.2023	351
4.	14.10.2023	369
5.	17.10.2023	444
6.	21.10.2023	400
7.	25.10.2023	387
8.	29.10.2023	415
Monthly Average		383.62
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/907

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.10.2023

DATE OF TEST COMMENCEMENT

: 05.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/928

Sample Identification /Locations

Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.10.2023	341
2.	07.10.2023	358
3.	11.10.2023	315
4.	14.10.2023	293
5.	17.10.2023	270
6.	21.10.2023	333
7.	25.10.2023	311
8.	29.10.2023	337
Monthly Average		319.75
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/908

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.10.2023

DATE OF TEST COMMENCEMENT

: 05.10.2023

DATE OF COMPLETION

: 31.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/929

Sample Identification /Locations

Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.10.2023	288
2.	07.10.2023	357
3.	11.10.2023	362
4.	14.10.2023	261
5.	17.10.2023	347
6.	21.10.2023	244
7.	25.10.2023	235
8.	29.10.2023	305
Monthly Average		299.87
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda
(Quality Manager)

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E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/23-24/KRPL/909

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Noise Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 18.10.2023

DATE OF TEST COMMENCEMENT

: 18.10.2023

DATE OF COMPLETION

: 21.10.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/930

-

Near Quarry

EMC/Lab/931

-

Near Crusher Plant

EMC/Lab/932

-

Near Tensa Township

EMC/Lab/933

-

Near Village Tantra

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	16.10.2023	Near Quarry	dB (A) Leq	66.3	51.9
02		Near Crusher Plant	dB (A) Leq	71.2	62.3
03		Near Tensa Township	dB (A) Leq	61.7	55.4
04		Near Village Tantra	dB (A) Leq	52.9	41.7
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy
Day Time: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR 30 DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/911

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ground Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 18.10.2023

DATE OF TEST COMMENCEMENT

: 18.10.2023

DATE OF COMPLETION

: 21.10.2023

Sample Specification: Sample ID. No.

EMC/Lab/936 -

EMC/Lab/937 -

EMC/Lab/938 -

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)

GW2- Village Tensa (Tube Well)

GW3- Village Tantra (Tube Well)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS: 10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.1	7.0	7.5
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	102.0	118.0	122.0
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.13	0.22	0.27
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	34.0	26.0	32.0
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	218.0	222.0	230.0
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	30.52	26.63	31.52
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	8.2	10.1	12.4
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.03	0.05	0.04
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	10.1	11.4	10.3
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	2.73	2.58	2.41
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.11	0.14	0.13
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN ⁻ C,D	mg/l	0.05	No	ND	ND	ND

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



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24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No	<0.01	<0.01	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	0.12	0.14	0.13
26	Chromium (as Cr)	APHA 3111 C	mg/l	0.05	No	<0.05	<0.05	<0.05
27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	116.0	110.0	112.0
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
Laxmi Sahoo
(Chemist)
Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/23-24/KRPL/910

DT-03.11.2023

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Surface Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 18.10.2023

DATE OF TEST COMMENCEMENT

: 18.10.2023

DATE OF COMPLETION

: 21.10.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/934

-

SW1- US of Samaji Nala

EMC/Lab/935

-

SW2- DS of Samaji Nala

Sl. No.	Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1	SW2
1	Colour, Max.	APHA 2010 B, C	Hazen	300	40	60
2	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	6.6	7.1
3	Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.46	0.52
4	Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	42.8	46.2
5	Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	177.0	180.0
6	Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	5.1	6.3
7	BOD for 3 days@ 27 ^o C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
8	Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
9	Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
10	Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	19.8	21.6
11	Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	2.92	2.95
12	Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.12	0.17
13	Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
14	Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
15	Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
16	Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
17	Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
19	Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
20	Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
21	Hexavalent Chromium as Cr ⁶⁺ , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
22	Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	252	270
23	Faecal Coliform	APHA 9221 B	MPN/100ml	--	<1.8	<1.8

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/921

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/950

-

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.11.2023	74.9	40.2	12.1	18.1	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	74.2	36.2	11.1	23.1	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	72.2	35.9	11.6	18.3	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	72.1	38.3	12.4	18.7	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	78.2	38.2	11.5	18.3	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	77.9	38.7	11.7	21.2	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	73.5	38.9	12.4	19.4	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	70.6	36.5	10.9	23.4	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	74.29	37.91	11.70	20.16	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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 Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra, Bhubaneswar-751010
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/922

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/951

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	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 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	O ₃ ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)	Pb ($\mu\text{g}/\text{m}^3$)	Ni (ng/m^3)	As (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)
02.11.2023	58.9	35.7	9.2	24.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	57.7	36.9	10.9	24.0	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	61.9	37.2	11	17.1	0.43	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	66.3	36.7	8.8	20.4	0.43	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	56.5	36.6	10.1	19.2	0.40	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	57.1	37.1	9.2	20.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	58.0	35.5	9.4	19.8	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	56.0	37	8.8	19.0	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	59.16	36.69	9.17	20.5	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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END OF REPORT

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/921

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/950

-

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.11.2023	74.9	40.2	12.1	18.1	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	74.2	36.2	11.1	23.1	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	72.2	35.9	11.6	18.3	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	72.1	38.3	12.4	18.7	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	78.2	38.2	11.5	18.3	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	77.9	38.7	11.7	21.2	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	73.5	38.9	12.4	19.4	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	70.6	36.5	10.9	23.4	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	74.29	37.91	11.70	20.16	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/922

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/951

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.11.2023	58.9	35.7	9.2	24.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	57.7	36.9	10.9	24.0	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	61.9	37.2	11	17.1	0.43	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	66.3	36.7	8.8	20.4	0.43	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	56.5	36.6	10.1	19.2	0.40	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	57.1	37.1	9.2	20.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	58.0	35.5	9.4	19.8	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	56.0	37	8.8	19.0	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	59.16	36.69	9.17	20.5	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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END OF REPORT

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/923

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/952

Sample Identification /Locations

Near Tensa Township

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.11.2023	64.3	30.9	10.2	17.0	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	64.3	34.6	9.9	22.9	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	62.6	38.0	9.0	19.4	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	60.1	30.9	11.1	24.1	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	64.1	30.7	11.9	20.1	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	59.4	35.8	11.0	16.9	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	66.1	32.2	11.9	23.8	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	57.5	30.9	10.3	22.3	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	62.39	33.00	10.33	20.81	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/924

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.11.2023

DATE OF TEST COMMENCEMENT

: 06.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/953

Sample Identification /Locations

Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.11.2023	53.4	27.2	7.0	14.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
06.11.2023	58.1	26.1	7.7	13.9	0.25	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.11.2023	50.7	31.3	7.3	13.5	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.11.2023	55.7	31.2	7.1	11.1	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
16.11.2023	59.7	25.6	5.7	14.4	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.06.2023	52.5	32.4	7.3	11.1	0.22	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
23.11.2023	53.9	32.4	5.5	13.0	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.11.2023	54.0	32.5	7.5	14.3	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	54.81	29.81	6.91	13.29	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/925

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.11.2023

DATE OF TEST COMMENCEMENT

: 04.11.2023

04.04.2022 DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/954

Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.11.2023	508
2.	06.11.2023	452
3.	10.11.2023	430
4.	13.11.2023	411
5.	16.11.2023	371
6.	20.11.2023	366
7.	23.11.2023	432
8.	25.11.2023	412
Monthly Average		422.75
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/926

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.11.2023

DATE OF TEST COMMENCEMENT

: 04.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/955

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.11.2023	477
2.	06.11.2023	368
3.	10.11.2023	433
4.	13.11.2023	520
5.	16.11.2023	459
6.	20.11.2023	361
7.	23.11.2023	350
8.	25.11.2023	311
Monthly Average		409.87
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/927

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.11.2023

DATE OF TEST COMMENCEMENT

: 04.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/956

Sample Identification /Locations

Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.11.2023	417
2.	06.11.2023	378
3.	10.11.2023	339
4.	13.11.2023	330
5.	16.11.2023	325
6.	20.11.2023	322
7.	23.11.2023	366
8.	25.11.2023	449
Monthly Average		365.75
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/928

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.11.2023

DATE OF TEST COMMENCEMENT

: 04.11.2023

DATE OF COMPLETION

: 29.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/957

Sample Identification /Locations

Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.11.2023	417
2.	06.11.2023	388
3.	10.11.2023	323
4.	13.11.2023	291
5.	16.11.2023	248
6.	20.11.2023	351
7.	23.11.2023	217
8.	25.11.2023	220
Monthly Average		306.87
Standard		1200

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/929

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Noise Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 21.11.2023

DATE OF TEST COMMENCEMENT

: 21.11.2023

DATE OF COMPLETION

: 25.11.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/958

-

Near Quarry

EMC/Lab/959

-

Near Crusher Plant

EMC/Lab/960

-

Near Tensa Township

EMC/Lab/961

-

Near Village Tantra

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	18.11.2023	Near Quarry	dB (A) Leq	64.8	51.1
02		Near Crusher Plant	dB (A) Leq	72.3	59.9
03		Near Tensa Township	dB (A) Leq	61.2	53.7
04		Near Village Tantra	dB (A) Leq	52.5	46.8
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy
Day Time: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/930

DT-04.12.2023

DISCIPLINE : Chemical Testing, Water.
 NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
 NAME OF PROJECT/WORK : ---
 REFERENCE NO. : KRPL/ENV/22-23-391 Dt- 26.03.2023
 TYPE OF SAMPLE : Surface Water.
 SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
 CONDITION OF SAMPLE : Sealed
 TYPE OF TEST : Physical & Chemical Parameters
 DATE OF SAMPLE RECEIVED : 21.11.2023
 DATE OF TEST COMMENCEMENT : 21.11.2023
 DATE OF COMPLETION : 25.11.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/962
EMC/Lab/963

SW1- US of Samaji Nala
SW2- DS of Samaji Nala

Sl. No.	Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1	SW2
1	Colour, Max.	APHA 2010 B, C	Hazen	300	40	60
2	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	6.61	6.79
3	Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.52	0.68
4	Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	45.8	52.3
5	Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	181.0	185.0
6	Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	3.6	4.0
7	BOD for 3 days@ 27°C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
8	Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
9	Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
10	Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	20.2	21.6
11	Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	2.38	2.48
12	Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.16	0.24
13	Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
14	Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
15	Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
16	Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
17	Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
19	Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
20	Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
21	Hexavalent Chromium as Cr ^{VI} , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
22	Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	382	426
23	Faecal Coliform	APHA 9221 B	MPN/100ml	--	6	8

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/931

DT-04.12.2023

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ground Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 21.11.2023

DATE OF TEST COMMENCEMENT

: 21.11.2023

DATE OF COMPLETION

: 25.11.2023

Sample Specification: Sample ID. No.

EMC/Lab/964 -

EMC/Lab/965 -

EMC/Lab/966 -

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)

GW2- Village Tensa (Tube Well)

GW3- Village Tantra (Tube Well)

Sl.No	Parameter	Testing Methods	Unit	Standard as per IS:10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.31	7.40	7.26
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	102.0	110.0	108.0
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.12	0.20	0.22
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	22.0	25.0	18.0
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	190.0	210.0	198.0
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	21.98	26.82	32.20
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	12.2	8.8	8.2
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (asMn)	APHA 3500Mn B	mg/l	0.1	0.3	0.03	0.06	0.05
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	11.6	9.2	10.8
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	2.4	2.2	2.5
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.06	0.12	0.17
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



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23	Cyanide (as CN)	APHA 4500 CN ⁻ C,D	mg/l	0.05	No	ND	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No	<0.01	<0.01	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	0.15	0.10	0.14
26	Chromium (as Cr)	APHA 3111 C	mg/l	0.05	No	<0.05	<0.05	<0.05
27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	104.0	100.0	112.0
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/951

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 30.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/972

Sample Identification /Locations

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.12.2023	45.7	25.9	6.9	12.0	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
04.12.2023	45.2	25.5	5.8	10.5	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.12.2023	44.4	27.4	6.6	9.8	0.17	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.12.2023	47.4	25.2	6.3	9.9	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.12.2023	47.1	26.3	5.8	10.0	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.12.2023	47.4	28.9	6.0	10.1	0.16	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.12.2023	46.1	27.9	6.8	10.2	0.22	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
26.12.2023	46.9	28.6	5.7	9.8	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	46.32	27.01	6.27	10.39	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/952

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dr- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 30.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/973

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.12.2023	48.0	34.9	8.9	11.8	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
04.12.2023	53.6	34.6	8.6	11.0	0.29	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.12.2023	47.5	35.3	8.4	13.0	0.30	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.12.2023	53.1	31.1	8.3	13.6	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.12.2023	48.1	34.3	8.7	13.5	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.12.2023	47.6	34.4	8.2	11.8	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.12.2023	47.3	34	8.4	11.9	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
26.12.2023	49.4	35.3	8.7	13.2	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	49.39	34.21	8.51	12.53	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/954

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 30.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/975

Sample Identification /Locations

Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.12.2023	32.3	23.8	6.2	10.3	0.15	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
04.12.2023	32.9	20.6	5.3	11.7	0.17	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.12.2023	34.1	20.2	6.6	11.0	0.12	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
09.12.2023	32.1	21.4	5.2	10.8	0.13	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.12.2023	31.2	22.1	6.4	10.5	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.12.2023	34.1	21.6	5.8	10.6	0.11	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.12.2023	34.3	20.9	6.0	11.5	0.14	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
26.12.2023	31.3	20.6	5.5	10.6	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	32.80	21.47	5.91	10.09	0.15	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



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Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/955 DT-02.01.2024
DISCIPLINE : Chemical Testing, Atmospheric Pollution.
NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
NAME OF PROJECT/WORK : ---
REFERENCE NO. : KRPL/ENV/22-23-391 Dt- 26.03.2023
TYPE OF SAMPLE : Ambient Air Fugitive Dust Sample
SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
CONDITION OF SAMPLE : Sealed
TYPE OF TEST : Physical & Chemical Parameters
DATE OF SAMPLE RECEIVED : 05.12.2023
DATE OF TEST COMMENCEMENT : 05.12.2023
DATE OF COMPLETION : 29.12.2023

Sample Specification: Sample ID. No.
EMC/Lab/976

Sample Identification /Locations
Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	01.12.2023	355
2.	04.12.2023	418
3.	07.12.2023	279
4.	11.12.2023	309
5.	13.12.2023	297
6.	16.12.2023	444
7.	29.12.2023	329
8.	23.12.2023	414
Monthly Average		355.62
Standard		1200

PREPARED BY
Laxmi Sahoo
(Chemist)
Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/956

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 29.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/977

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	01.12.2023	308
2.	04.12.2023	287
3.	07.12.2023	341
4.	11.12.2023	428
5.	13.12.2023	368
6.	16.12.2023	386
7.	29.12.2023	370
8.	23.12.2023	365
Monthly Average		356.62
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/957

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 29.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/978

Sample Identification /Locations

Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	01.12.2023	295
2.	04.12.2023	258
3.	07.12.2023	224
4.	11.12.2023	232
5.	13.12.2023	266
6.	16.12.2023	354
7.	29.12.2023	311
8.	23.12.2023	317
Monthly Average		282.12
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/958

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.12.2023

DATE OF TEST COMMENCEMENT

: 05.12.2023

DATE OF COMPLETION

: 29.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/979

Sample Identification /Locations

Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	01.12.2023	336
2.	04.12.2023	358
3.	07.12.2023	265
4.	11.12.2023	306
5.	13.12.2023	284
6.	16.12.2023	257
7.	29.12.2023	216
8.	23.12.2023	185
Monthly Average		275.87
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/959

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Noise Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 11.12.2023

DATE OF TEST COMMENCEMENT

: 11.12.2023

DATE OF COMPLETION

: 15.12.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/980

-

Near Quarry

EMC/Lab/981

-

Near Crusher Plant

EMC/Lab/982

-

Near Tensa Township

EMC/Lab/983

-

Near Village Tantra

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	09.12.2023	Near Quarry	dB (A) Leq	51.3	40.6
02		Near Crusher Plant	dB (A) Leq	53.8	44.9
03		Near Tensa Township	dB (A) Leq	50.9	39.2
04		Near Village Tantra	dB (A) Leq	58.1	34.5
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy DayTime: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/960

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Surface Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 22.12.2023

DATE OF TEST COMMENCEMENT

: 22.12.2023

DATE OF COMPLETION

: 29.12.2023

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/984

SW1- US of Samaji Nala

EMC/Lab/985

SW2- DS of Samaji Nala

Sl. No.	Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 :Class C	SW1	SW2
1	Colour, Max.	APHA 2010 B, C	Hazen	300	34	42
2	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	7.32	7.25
3	Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.24	0.32
4	Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	24.8	32.2
5	Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	150.5	154.5
6	Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	4.2	4.8
7	BOD for 3 days @ 27° C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
8	Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
9	Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
10	Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	14.6	16.1
11	Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	1.58	1.64
12	Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.12	0.16
13	Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
14	Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
15	Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
16	Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
17	Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
19	Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
20	Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
21	Hexavalent Chromium as Cr ⁶⁺ , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
22	Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	460	540
23	Faecal Coliform	APHA 9221 B	MPN/100ml	--	8	10

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

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(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/23-24/KRPL/961

DT-02.01.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ground Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 22.12.2023

DATE OF TEST COMMENCEMENT

: 22.12.2023

DATE OF COMPLETION

: 29.12.2023

Sample Specification: Sample ID. No.

EMC/Lab/986 -

EMC/Lab/987 -

EMC/Lab/988 -

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)

GW2- Village Tensa (Tube Well)

GW3- Village Tantra (Tube Well)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS: 10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.32	7.24	7.42
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	72.0	80.0	84.0
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.10	0.14	0.16
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	24.0	30.0	32.0
9	Residual, free Chlorine	APHA 4500Cl ₁ , B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	192.0	210.0	216.0
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	14.6	18.6	16.6
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	8.4	9.8	8.8
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.05	0.07	0.08
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	8.44	8.60	9.21
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	1.28	1.40	1.52
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.12	0.14	0.10

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ENVOMIN CONSULTANT PRIVATE LIMITED

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18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN C,D	mg/l	0.05	No	ND	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No	<0.01	<0.01	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	0.10	0.12	0.13
26	Chromium (as Cr)	APHA 3111 C	mg/l	0.05	No	<0.05	<0.05	<0.05
27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	68.0	72.0	70.0
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



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Debasish Gouda
(Quality Manager)

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/009

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 04.01.2024

DATE OF TEST COMMENCEMENT

: 04.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/036

Sample Identification /Locations

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.01.2024	71.2	33.9	9.6	13.2	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.01.2024	70.0	30.8	10.6	13.7	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
08.01.2024	70.9	34.2	9.4	16.4	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
11.01.2024	66.2	35.2	9.6	17.5	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.01.2024	71.2	30.6	10.0	17.1	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.01.2024	68.0	35.3	10.1	14.3	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
22.01.2024	71.8	30.9	9.8	12.6	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.01.2024	69.3	33.3	10.4	13.6	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	68.80	33.00	9.91	14.85	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/010

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 04.01.2024

DATE OF TEST COMMENCEMENT

: 04.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/037

Near Crusher Plant

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.01.2024	62.2	37.7	9.3	15.6	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.01.2024	55.2	33.9	10.3	16	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
08.01.2024	58.3	36.1	10.1	17.3	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
11.01.2024	62.6	35.3	11.0	17.2	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.01.2024	52.8	37.2	10.1	16.7	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.01.2024	59.3	33.2	10.8	17.4	0.40	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
22.01.2024	58.4	35.7	10.2	15.5	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.01.2024	62.5	35.4	11.1	15.2	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	58.92	35.61	10.41	16.40	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/24-25/KRPL/011

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 04.01.2024

DATE OF TEST COMMENCEMENT

: 04.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/038

Near Tensa Township

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.01.2024	61.3	34.2	6.7	16.4	0.29	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.01.2024	60.3	34.8	6.8	15.5	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
08.01.2024	60.7	34.8	7.4	15.5	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
11.01.2024	60.9	35.1	7.5	14.8	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.01.2024	60.8	34.2	7.2	16.1	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.01.2024	60.7	35.3	7.2	16.5	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
22.01.2024	60.8	33.0	7.6	15.7	0.25	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.01.2024	61.1	34.6	6.8	15.2	0.40	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	60.81	34.53	7.21	15.72	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/24-25/KRPL/012

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 04.01.2024

DATE OF TEST COMMENCEMENT

: 04.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/039

Sample Identification /Locations

- Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
02.01.2024	58.1	28.2	6.5	13.1	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.01.2024	60.4	29.5	5.6	13.7	0.22	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
08.01.2024	57.9	28.4	6.2	12.2	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
11.01.2024	58.8	28.3	6.5	11.1	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.01.2024	58.4	29.4	6.7	12.3	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
18.01.2024	61.9	30.2	6.8	12.8	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
22.01.2024	60.8	31.4	6.5	12.8	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
25.01.2024	59	27.8	6.3	11.9	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	59.48	29.26	6.41	12.58	0.22	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-

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-END OF REPORT-



AUTHORIZED SIGNATORY

Debashish Gouda

(Quality Manager)

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-Ill, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)
TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/013

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 08.01.2024

DATE OF TEST COMMENCEMENT

: 08.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/040

Sample Identification /Locations

Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.01.2024	435
2.	06.01.2024	431
3.	09.01.2024	383
4.	11.01.2024	405
5.	15.01.2024	371
6.	18.01.2024	411
7.	22.01.2024	420
8.	24.01.2024	455
Monthly Average		413.87
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-Ill, Bhubaneswar-751001, Odisha,
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ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/014

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 08.01.2024

DATE OF TEST COMMENCEMENT

: 08.01.2024

DATE OF COMPLETION

: 29.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/041

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.01.2024	336
2.	06.01.2024	417
3.	09.01.2024	422
4.	11.01.2024	434
5.	15.01.2024	451
6.	18.01.2024	433
7.	22.01.2024	351
8.	24.01.2024	347
Monthly Average		398.87
Standard		1200

PREPARED BY

Laxmi Sahoo

(Chemist)

Remarks:-



AUTHORIZED SIGNATORY

Debasish Gouda

(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/015 DT-02.02.2024
DISCIPLINE : Chemical Testing, Atmospheric Pollution.
NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
NAME OF PROJECT/WORK : ----
REFERENCE NO. : KRPL/ENV/22-23-391 Dt- 26.03.2023
TYPE OF SAMPLE : Ambient Air Fugitive Dust Sample
SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
CONDITION OF SAMPLE : Sealed
TYPE OF TEST : Physical & Chemical Parameters
DATE OF SAMPLE RECEIVED : 08.01.2024
DATE OF TEST COMMENCEMENT : 08.01.2024
DATE OF COMPLETION : 29.01.2024

Sample Specification: Sample ID. No.
EMC/Lab/042

Sample Identification /Locations
Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.01.2024	391
2.	06.01.2024	406
3.	09.01.2024	382
4.	11.01.2024	447
5.	15.01.2024	373
6.	18.01.2024	311
7.	22.01.2024	321
8.	24.01.2024	424
Monthly Average		381.87
Standard		1200

PREPARED BY
Laxmi Sahoo
(Chemist)
Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
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ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/016
DISCIPLINE : Chemical Testing, Atmospheric Pollution.
NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
NAME OF PROJECT/WORK : ---
REFERENCE NO. : KRPL/ENV/22-23-391
TYPE OF SAMPLE : Ambient Air Fugitive Dust Sample
SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
CONDITION OF SAMPLE : Sealed
TYPE OF TEST : Physical & Chemical Parameters
DATE OF SAMPLE RECEIVED : 08.01.2024
DATE OF TEST COMMENCEMENT : 08.01.2024
DATE OF COMPLETION : 29.01.2024

DT-02.02.2024

Dt- 26.03.2023

Sample Specification: Sample ID. No.
EMC/Lab/043

Sample Identification /Locations
Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	03.01.2024	348
2.	06.01.2024	336
3.	09.01.2024	330
4.	11.01.2024	419
5.	15.01.2024	382
6.	18.01.2024	287
7.	22.01.2024	280
8.	24.01.2024	310
Monthly Average		336.50
Standard		1200

PREPARED BY
Laxmi Sahoo
(Chemist)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mineral Plant in J. Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/24-25/KRPL/017
DISCIPLINE

DT-02.02.2024

NAME & ADDRESS OF CLIENT/AGENCY

: Chemical Testing, Atmospheric Pollution.

NAME OF PROJECT/WORK

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

REFERENCE NO.

: ---

TYPE OF SAMPLE

: KRPL/ENV/22-23-391

Dt- 26.03.2023

SAMPLE COLLECTED BY

: Ambient Noise Sample

CONDITION OF SAMPLE

: ECPL Representative in presence of client's Representative

TYPE OF TEST

: Sealed

DATE OF SAMPLE RECEIVED

: Physical & Chemical Parameters

DATE OF TEST COMMENCEMENT

: 16.01.2024

DATE OF COMPLETION

: 16.01.2024

: 22.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/044

-

Sample Identification /Locations

Near Quarry

EMC/Lab/045

-

Near Crusher Plant

EMC/Lab/046

-

Near Tensa Township


EMC/Lab/047

-

Near Village Tantra

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy Day
Time: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	13.01.2024	Near Quarry	dB (A) Leq	66.3	60.8
02		Near Crusher Plant	dB (A) Leq	68.6	56.9
03		Near Tensa Township	dB (A) Leq	58.5	53.4
04		Near Village Tantra	dB (A) Leq	70.4	59.1
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40


PREPARED BY
Laxmi Sahoo
(Chemist)




AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Feasibility Proposal and Environmental Engineering)

REPORT NO. EMC/22-23/KRPL/018

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

DT- 26.03.2023

TYPE OF SAMPLE

: Surface Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 20.01.2024

DATE OF TEST COMMENCEMENT

: 22.01.2024

DATE OF COMPLETION

: 27.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/048

EMC/Lab/049

Sample Identification /Locations

SW1- US of Samaji Nala

SW2- DS of Samaji Nala

Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1	SW2
Color, Max.	APHA 2010 B, C	Hazen	300	40	60
pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	6.34	7.15
Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.32	0.46
Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	29.8	32.4
Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	158.5	175.5
Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	4.1	5.0
BOD for 3 days@ 27° C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	14.9	17.8
Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	2.2	2.6
Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.10	0.15
Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



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Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
Hexavalent Chromium as Cr ⁶⁺ , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	460	580
Faecal Coliform	APHA 9221 B	MPN/100ml	--	10	18

PREPARED BY
Laxmi Sahoo
(Chemist)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

REPORT NO.:- EMC/24-25/KRPL/019

DT-02.02.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ground Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 20.01.2024

DATE OF TEST COMMENCEMENT

: 22.01.2024

DATE OF COMPLETION

: 27.01.2024

Sample Specification: Sample ID. No.

EMC/Lab/050

EMC/Lab/051

EMC/Lab/052

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)

GW2- Village Tensa (Tube Well)

GW3- Village Tantra (Tube Well)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS: 10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.25	7.20	7.38
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	98.0	92.0	110.0
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.12	0.16	0.20
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	22.0	26.0	28.0
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	200.0	208.0	212.0
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	20.5	24.6	26.2
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	8.2	10.2	9.0
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.06	0.08	0.04
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	10.5	10.2	9.9
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	2.36	2.31	2.38
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.19	0.17	0.22
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN C,D	mg/l	0.05	No	ND	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.05	No	0.01	0.01	0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	0.11	0.13	0.13
26	Chromium (as Cr)	APHA 3111 B,C	mg/l	0.05	No	0.05	0.05	<0.05

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E-mail:envomin@yahoo.com, web site:www.envomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



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27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	98.2	104.0	112.3
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
Laxmi Sahoo
(Chemist)
Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/028

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 27.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/066

Sample Identification /Locations

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.02.2024	67.8	34.6	10.2	14.4	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.02.2024	69.1	32.4	10.5	14.5	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.02.2024	71.7	31.5	10.1	15.0	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
10.02.2024	71.9	34.0	9.4	13.0	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.02.2024	66.7	35.7	10.5	15.1	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
17.02.2024	70.0	30.7	9.9	17.1	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
20.02.2024	70.6	32.6	10.4	16.6	0.39	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
24.02.2024	68.9	33.6	10.7	16.8	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	69.60	33.13	10.20	15.35	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/029

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 27.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/067

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.02.2024	65.9	35.2	9.6	16.3	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.02.2024	60.0	36.1	11.0	15.9	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.02.2024	59.4	35.9	9.4	15.8	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
10.02.2024	60.6	36.7	10.4	15.2	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.02.2024	62.4	37.4	9.9	15.3	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
17.02.2024	63.3	34.0	11.1	15.7	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
20.02.2024	61.3	37.4	9.7	15.8	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
24.02.2024	64.0	34.2	10.4	15.9	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	63.15	35.90	10.21	15.73	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/030

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 27.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/068

Sample Identification /Locations

Near Tensa Township

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.02.2024	61.1	34.6	7.5	16.3	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.02.2024	61.5	35.1	7.8	15.5	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.02.2024	60.7	33.2	6.9	15.8	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
10.02.2024	61.2	33.3	7.7	15.9	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.02.2024	60.7	35.1	6.8	15.5	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
17.02.2024	60.9	33.0	7.3	14.8	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
20.02.2024	61.0	34.8	7.2	16.4	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
24.02.2024	60.9	33.7	7.5	15.8	0.38	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	61.10	34.21	7.35	15.82	0.30	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/031

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 03.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 27.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/069

Sample Identification /Locations

- Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
01.02.2024	61.1	31.3	6.7	13.2	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
05.02.2024	59.7	29.0	6.3	12.7	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.02.2024	59.0	29.4	6.5	12.0	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
10.02.2024	60.9	30.6	6.5	13.1	0.24	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
13.02.2024	59.6	30.8	6.6	13.3	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
17.02.2024	58.9	30.2	6.5	12.9	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
20.02.2024	58.2	29.6	6.6	13.1	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
24.02.2024	59.8	30.7	6.7	11.9	0.25	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	59.74	30.22	6.69	12.81	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/032

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 29.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/070

Sample Identification /Locations

Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.02.2024	427
2.	06.02.2024	418
3.	10.02.2024	396
4.	13.02.2024	411
5.	15.02.2024	380
6.	19.02.2024	409
7.	21.02.2024	427
8.	26.02.2024	441
Monthly Average		413.62
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/033

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 29.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/071

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.02.2024	342
2.	06.02.2024	418
3.	10.02.2024	413
4.	13.02.2024	422
5.	15.02.2024	440
6.	19.02.2024	428
7.	21.02.2024	360
8.	26.02.2024	333
Monthly Average		394.52
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/034

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 29.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/072

Sample Identification /Locations

Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.02.2024	380
2.	06.02.2024	413
3.	10.02.2024	371
4.	13.02.2024	438
5.	15.02.2024	382
6.	19.02.2024	315
7.	21.02.2024	326
8.	26.02.2024	406
Monthly Average		378.87
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/035

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 05.02.2024

DATE OF TEST COMMENCEMENT

: 05.02.2024

DATE OF COMPLETION

: 29.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/073

Sample Identification /Locations

Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.02.2024	351
2.	06.02.2024	326
3.	10.02.2024	342
4.	13.02.2024	408
5.	15.02.2024	391
6.	19.02.2024	306
7.	21.02.2024	297
8.	26.02.2024	314
Monthly Average		296.87
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/036

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Noise Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 14.02.2024

DATE OF TEST COMMENCEMENT

: 14.02.2024

DATE OF COMPLETION

: 23.02.2024

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/074

-

Near Quarry

EMC/Lab/075

-

Near Crusher Plant

EMC/Lab/076

-

Near Tensa Township

EMC/Lab/077

-

Near Village Tantra

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	12.02.2024	Near Quarry	dB (A) Leq	65.8	59.4
02		Near Crusher Plant	dB (A) Leq	67.2	55.7
03		Near Tensa Township	dB (A) Leq	56.4	51.9
04		Near Village Tantra	dB (A) Leq	72.5	62.6
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy Day Time: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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-END OF REPORT-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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TEST REPORT

REPORT NO.:- EMC/22-23/KRPL/037

DT-04.03.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Surface Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 17.02.2024

DATE OF TEST COMMENCEMENT

: 19.02.2024

DATE OF COMPLETION

: 25.02.2024

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/078

-

SW1- US of Samaji Nala

EMC/Lab/079

-

SW2- DS of Samaji Nala

Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1	SW2
Color, Max.	APHA 2010 B, C	Hazen	300	40	60
pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	6.51	6.98
Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.34	0.47
Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	25.4	31.9
Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	161.6	180.3
Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	4.4	4.9
BOD for 3 days@ 27°C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	14.8	16.2
Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	2.5	2.8
Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.12	0.18
Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND

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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

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Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
Hexavalent Chromium as Cr ⁺⁶ , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	420	540
Faecal Coliform	APHA 9221 B	MPN/100ml	--	12	20

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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ENVOMIN CONSULTANT PRIVATE LIMITED

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REPORT NO.:- EMC/24-25/KRPL/038

DT-04.03.2024

DISCIPLINE : Chemical Testing, Water.
 NAME & ADDRESS OF CLIENT/AGENCY : M/s Tantra Iron Ore Mines, Tensa, Sundergarh.
 NAME OF PROJECT/WORK : ---
 REFERENCE NO. : KRPL/ENV/22-23-391 Dt- 26.03.2023
 TYPE OF SAMPLE : Ground Water.
 SAMPLE COLLECTED BY : ECPL Representative in presence of client's Representative
 CONDITION OF SAMPLE : Sealed
 TYPE OF TEST : Physical & Chemical Parameters
 DATE OF SAMPLE RECEIVED : 17.02.2024
 DATE OF TEST COMMENCEMENT : 19.02.2024
 DATE OF COMPLETION : 25.02.2024

Sample Specification: Sample ID. No.

EMC/Lab/080 -
 EMC/Lab/081 -
 EMC/Lab/082 -

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)
 GW2- Village Tensa (Tube Well)
 GW3- Village Tantra (Tube Well)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS: 10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.32	7.24	7.42
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	102.0	96.0	106.0
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.14	0.10	0.18
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	24.0	22.0	30.0
9	Residual, free Chlorine	APHA 4500Cl ⁻ B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	198.0	206.0	210.0
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	22.4	26.8	24.5
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	7.9	11.1	8.8
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.04	0.08	0.06
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	10.7	9.8	10.2
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	2.40	2.26	2.44
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.14	0.13	0.24
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN ⁻ C,D	mg/l	0.05	No	ND	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.05	No	<0.001	<0.001	<0.001
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	No	0.11	0.11	0.13

Regd Office: Plot No. SCR-58, Khavel Nagar, Unit III, Bhubaneswar-751001, Odisha

Laboratory: Plot No. 3054/9825, Saptasati Vihar, Pandra, Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



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26	Chromium (as Cr)	APHA 3111 C	mg/l	0.05	No	<0.05	<0.05	<0.05
27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	98.6	106.2	114.6
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR SEVEN DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-Ill, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/052

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/105

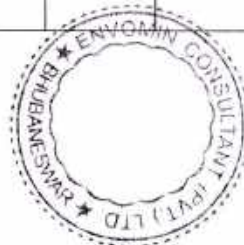
Sample Identification /Locations

Near Mines Quarry

Date of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
04.03.2024	70.8	30.5	10.9	16.6	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.03.2024	68.5	33.1	9.6	12.9	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.03.2024	67.6	33.2	10.9	17.8	0.34	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.03.2024	67.8	32.2	10.8	17.3	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.03.2024	66.5	30.6	10.1	15.0	0.25	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.03.2024	67.4	32.4	10.1	15.5	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
27.03.2024	70.0	31.8	11.2	16.3	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
29.03.2024	68.6	33.1	10.1	12.3	0.33	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg.	68.4	32.1	10.5	15.5	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophenol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB method followed by AAS	As per CPCB method followed by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR 30 DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/053

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/106

Sample Identification /Locations

Near Crusher Plant

Date of Sampling	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 ($\mu\text{g}/\text{m}^3$)	CO (mg/m^3)	O ₃ ($\mu\text{g}/\text{m}^3$)	NH ₃ ($\mu\text{g}/\text{m}^3$)	Pb ($\mu\text{g}/\text{m}^3$)	Ni (ng/m^3)	As (ng/m^3)	Benzene ($\mu\text{g}/\text{m}^3$)	BaP (ng/m^3)
04.03.2024	62.8	34.6	9.1	15.4	0.25	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.03.2024	64.1	36.1	11.2	13.4	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.03.2024	64.9	37.2	10.1	16.3	0.35	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.03.2024	63.1	35.5	10.9	17.7	0.36	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.03.2024	63.4	34.8	11.0	16.3	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.03.2024	63.1	34.6	9.8	17.6	0.37	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
27.03.2024	65.2	36.1	9.3	15.3	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
29.03.2024	64.4	35.4	9.6	15.1	0.30	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	63.9	35.5	10.1	15.9	0.32	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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2. THE TEST RESULT RELATES ONLY TO THE ITEM TESTED.
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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR 30 DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-Ill, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/054

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/107

Sample Identification /Locations

Near Tensa Township

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
04.03.2024	59.9	32.9	8.3	16.2	0.29	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.03.2024	61.7	33.1	7.1	14.8	0.26	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.03.2024	61.6	32.9	8.2	15.9	0.28	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.03.2024	59.9	34.5	7.4	16.7	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.03.2024	61.6	32.8	7.5	14.8	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.03.2024	60.2	32.9	8.0	14.6	0.23	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
27.03.2024	61.6	33.5	7.5	14.5	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
29.03.2024	61.0	32.7	7.8	14.9	0.31	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	60.9	33.2	7.7	15.3	0.27	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part- 23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part- 10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part- 22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part- 11)	IS: 5182 (Part- 12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR 30 DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/055

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Quality (AAQ)

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/108

Sample Identification /Locations

Near Village Tantra

Date Of Sampling	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	SO ₂ (µg/m ³)	NO _x (µg/m ³)	CO (mg/m ³)	O ₃ (µg/m ³)	NH ₃ (µg/m ³)	Pb (µg/m ³)	Ni (ng/m ³)	As (ng/m ³)	Benzene (µg/m ³)	BaP (ng/m ³)
04.03.2024	55.9	29.9	6.2	13.0	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
07.03.2024	56.3	28.7	7.2	12.3	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
12.03.2024	57.7	28.7	6.6	12.1	0.20	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
15.03.2024	57.0	30.8	7.0	12.3	0.21	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
19.03.2024	56.6	30.2	6.5	12.9	0.19	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
21.03.2024	56.7	29.3	7.0	12.4	0.16	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
27.03.2024	56.1	29.0	6.9	13.7	0.16	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
29.03.2024	56.9	29.0	6.2	12.1	0.17	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
Avg	56.7	29.5	6.7	12.6	0.18	<10	<20.0	<0.01	<3.0	<1	<1	<0.1
NAAQ* Standard	100	60	80	80	4	100	400	1.0	20	6	5	1
Methods of Analysis	IS: 5182 (Part-23)	Gravimetric Method as per CPCB method	IS: 5182 (Part-2)	IS: 5182 (Part-6)	IS: 5182 (Part-10)	IS: 5182 (Part-9)	Indophe nol Blue Method followed by CPCB	IS: 5182 (Part-22)	As per CPCB metho d followe d by AAS	As per CPCB metho d followe d by AAS	IS: 5182 (Part-11)	IS: 5182 (Part-12)

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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4. THE SAMPLE WILL BE RETAINED IN OUR LABORATORY FOR 30 DAYS AFTER DATE OF TEST COMPLETION.

-END OF REPORT-

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-Ill, Bhubaneswar-751001, Odisha,
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GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/056

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/109

Sample Identification /Locations

Near Mines Quarry

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.03.2024	412
2.	06.03.2024	382
3.	09.03.2024	396
4.	13.03.2024	411
5.	16.03.2024	380
6.	20.03.2024	409
7.	23.03.2024	427
8.	28.03.2024	441
Monthly Average		407.25
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

Remarks:-

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Regd Office: Plot No.SCR-58, Kharvel Nagar Unit III, Bhubaneswar-751001, Odisha,

Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra, Bhubaneswar-751010

E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/057

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/110

Sample Identification /Locations

Near Crusher Plant

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.03.2024	376
2.	06.03.2024	384
3.	09.03.2024	428
4.	13.03.2024	394
5.	16.03.2024	386
6.	20.03.2024	412
7.	23.03.2024	382
8.	28.03.2024	372
Monthly Average		391.75
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



AUTHORIZED SIGNATORY
Debasish Gouda
(Quality Manager)

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END OF REPORT

Regd Office: Plot No.SCR-58, Kharvel Nagar, Unit-III, Bhubaneswar-751001, Odisha,
Laboratory At: Plot No.3054/9625, Saptasati Vihar, Pandra,Bhubaneswar-751010
E-mail:envomin@yahoo.com, web site:wwwenvomin.in

GSTIN : 21AAACE6534C1ZB / PAN : AAACE6534C



ENVOMIN CONSULTANT PRIVATE LIMITED

(A Consultancy House for Mine Planning, Forest Proposal and Environmental Engineering)

TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/058

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/111

Sample Identification /Locations

Near Tensa Township

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.03.2024	374
2.	06.03.2024	378
3.	09.03.2024	382
4.	13.03.2024	388
5.	16.03.2024	392
6.	20.03.2024	384
7.	23.03.2024	396
8.	28.03.2024	372
Monthly Average		383.25
Standard		1200

PREPARED BY
Saroj Kumar Sahoo
(Executive)



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(Quality Manager)

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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/059

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Air Fugitive Dust Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/112

Sample Identification /Locations

Near Tantra Village

Sl. No.	Date of Sampling	Particulate Matter ($\mu\text{g}/\text{m}^3$)
1.	02.03.2024	312
2.	06.03.2024	296
3.	09.03.2024	293
4.	13.03.2024	298
5.	16.03.2024	293
6.	20.03.2024	305
7.	23.03.2024	309
8.	28.03.2024	308
Monthly Average		301.75
Standard		1200

PREPARED BY
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(Executive)



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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/060

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Atmospheric Pollution.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ambient Noise Sample

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

Sample Identification /Locations

EMC/Lab/113

-

Near Quarry

EMC/Lab/114

-

Near Crusher Plant

EMC/Lab/115

-

Near Tensa Township

EMC/Lab/116

-

Near Village Tantra

L_{min} : Minimum Noise Level L_{max} : Maximum Noise Level L_{eq} : Equivalent sound energy Day

Sl. No.	Date of Sampling	Location	Parameter	Time	
				Max.	Min.
01	14.03.2024	Near Quarry	dB (A) Leq	65.8	57.5
02		Near Crusher Plant	dB (A) Leq	67.2	56.6
03		Near Tensa Township	dB (A) Leq	56.4	50.8
04		Near Village Tantra	dB (A) Leq	54.5	48.3
STANDARD			Industrial Area	75	70
			Commercial Area	65	55
			Residential Area	55	45
			Sensitive Area	50	40

Time: Between 06.00 am to 10.00pm; Night time: Between 10.00pm to 06.00am.

PREPARED BY
Saroj Kumar Sahoo
(Executive)

Remarks:-



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Debasish Gouda
(Quality Manager)

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TEST REPORT

REPORT NO.:- EMC/22-23/KRPL/061

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ----

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Surface Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/117
EMC/Lab/118

Sample Identification /Locations

SW1- US of Samaji Nala
SW2- DS of Samaji Nala

Sl. No.	Test Parameters	Testing Methods	Unit	Max. Tolerance Limit as per IS 2296 : Class C	SW1	SW2
1	Color, Max.	APHA 2010 B, C	Hazen	300	38.0	57.0
2	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5 to 8.5	6.62	6.89
3	Iron as Fe, Max.	APHA 3500Fe, B	mg/l	50	0.32	0.41
4	Chloride as Cl, Max.	APHA 4500Cl ⁻ C	mg/l	600	26.5	32.4
5	Dissolved Solids, Max.	APHA 2540 C	mg/l	1500	162.7	184.2
6	Dissolved Oxygen, Min.	APHA 4500-O C	mg/l	4	5.6	5.2
7	BOD for 3 days @ 27°C, Max.	APHA 5210 B	mg/l	3	<1.8	<1.8
8	Oil & Grease, Max.	APHA 5520 B	mg/l	0.1	ND	ND
9	Copper as Cu, Max.	APHA 3111 B,C	mg/l	1.5	<0.03	<0.03
10	Sulphate as SO ₄ , Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	400	16.1	16.8
11	Nitrate as NO ₃ , Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	50	2.9	3.1
12	Fluoride as F, Max.	APHA 4500F ⁻ C	mg/l	1.5	0.14	0.17
13	Anionic detergent	APHA 5540 C	mg/l	1	ND	ND
14	Cadmium as Cd, Max.	APHA 4500 SO ₄ ²⁻ E	mg/l	0.01	<0.003	<0.003
15	Selenium as Se, Max.	APHA 4500 - NO ₃ ⁻ E	mg/l	0.05	<0.001	<0.001
16	Arsenic as As, Max.	APHA 4500F ⁻ C	mg/l	0.2	<0.001	<0.001
17	Cyanide as CN, Max.	APHA 4500 CN ⁻ C,D	mg/l	0.05	ND	ND
18	Phenolic compound as C ₆ H ₅ OH, Max.	APHA 5530 B,D	mg/l	0.005	<0.001	<0.001
19	Lead as Pb, Max.	APHA 3111 B,C	mg/l	0.1	<0.01	<0.01
20	Zinc as Zn, Max.	APHA 3111 B,C	mg/l	15	<0.05	<0.05
21	Hexavalent Chromium as Cr ⁶⁺ , Max.	APHA 3111 C	mg/l	0.05	<0.05	<0.05
22	Total Coliform, Max.	APHA 9221 B	MPN/100ml	5000	412	526
23	Faecal Coliform	APHA 9221 B	MPN/100ml	--	13	18

PREPARED BY
Saroj Kumar Sahoo
(Executive)



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Debasish Gouda
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TEST REPORT

REPORT NO.:- EMC/24-25/KRPL/062

DT-05.04.2024

DISCIPLINE

: Chemical Testing, Water.

NAME & ADDRESS OF CLIENT/AGENCY

: M/s Tantra Iron Ore Mines, Tensa, Sundergarh.

NAME OF PROJECT/WORK

: ---

REFERENCE NO.

: KRPL/ENV/22-23-391

Dt- 26.03.2023

TYPE OF SAMPLE

: Ground Water.

SAMPLE COLLECTED BY

: ECPL Representative in presence of client's Representative

CONDITION OF SAMPLE

: Sealed

TYPE OF TEST

: Physical & Chemical Parameters

DATE OF SAMPLE RECEIVED

: 06.03.2024

DATE OF TEST COMMENCEMENT

: 06.03.2024

DATE OF COMPLETION

: 04.04.2024

Sample Specification: Sample ID. No.

EMC/Lab/119 -
EMC/Lab/120 -
EMC/Lab/121 -

Sample Identification /Locations

GW1- Mining Lease Area (Bore Well)
GW2- Village Tensa (Tube Well)
GW3- Village Tantra (Tube Well)

Sl. No.	Parameter	Testing Methods	Unit	Standard as per IS: 10500,2012		GW1	GW2	GW3
				Acceptable Limit	Permissible Limit			
1	Colour	APHA 2010 B, C	Hazen	5	15	<5	<5	<5
2	Odour	APHA 2150 B	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Taste	APHA 2160 C	--	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity	APHA 2130 B	NTU	1	5	<1	<1	<1
5	pH Value @ 25°C	APHA 4500H ⁺ B	--	6.5-8.5	No	7.37	7.25	7.46
6	Total Hardness (as CaCO ₃)	APHA 2340 C	mg/l	200	600	110.2	97.8	108.1
7	Iron (as Fe)	APHA 3500Fe, B	mg/l	0.3	No	0.19	0.14	0.16
8	Chloride (as Cl)	APHA 4500Cl ⁻ C	mg/l	250	1000	24.0	22.0	30.0
9	Residual, free Chlorine	APHA 4500Cl, B	mg/l	0.2	1.0	ND	ND	ND
10	Total Dissolved Solids	APHA 2540 C	mg/l	500	2000	202.0	208.2	212.6
11	Calcium (as Ca)	APHA 3500Ca B	mg/l	75	200	22.4	26.8	24.5
12	Magnesium (as Mg)	APHA 3500Mg B	mg/l	30	100	8.4	12.8	9.6
13	Copper (as Cu)	APHA 3111 B,C	mg/l	0.05	1.5	<0.03	<0.03	<0.03
14	Manganese (as Mn)	APHA 3500Mn B	mg/l	0.1	0.3	0.03	0.06	0.07
15	Sulphate (as SO ₄)	APHA 4500 SO ₄ ²⁻ E	mg/l	200	400	11.4	10.2	9.9
16	Nitrate (as NO ₃)	APHA 4500 - NO ₃ ⁻ E	mg/l	45	No	2.51	2.42	2.34
17	Fluoride (as F)	APHA 4500F ⁻ C	mg/l	1.0	1.5	0.17	0.14	0.21
18	Phenolic Compounds (as C ₆ H ₅ OH)	APHA 5530 B,D	mg/l	0.001	0.002	<0.001	<0.001	<0.001
19	Mercury (as Hg)	APHA 3500 Hg	mg/l	0.001	No	<0.001	<0.001	<0.001
20	Cadmium (as Cd)	APHA 3111 B,C	mg/l	0.003	No	<0.003	<0.003	<0.003
21	Selenium (as Se)	APHA 3114 B	mg/l	0.01	No	<0.001	<0.001	<0.001
22	Arsenic (as As)	APHA 3114 B	mg/l	0.01	0.05	<0.001	<0.001	<0.001
23	Cyanide (as CN)	APHA 4500 CN ⁻ C,D	mg/l	0.05	No	ND	ND	ND
24	Lead (as Pb)	APHA 3111 B,C	mg/l	0.01	No	<0.01	<0.01	<0.01
25	Zinc (as Zn)	APHA 3111 B,C	mg/l	5	15	0.12	0.15	0.17

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26	Chromium (as Cr)	APHA 3111 C	mg/l	0.05	No	<0.05	<0.05	<0.05
27	Mineral Oil	APHA 5220 B	mg/l	0.5	No	<0.05	<0.05	<0.05
28	Total Alkalinity (as CaCO ₃)	APHA 2320 B	mg/l	200	600	98.9	107.1	113.3
29	Aluminium (as Al)	APHA 3111, C	mg/l	0.03	0.2	<0.01	<0.01	<0.01
30	Boron (as B)	APHA 3500-B	mg/l	0.5	1.0	<0.2	<0.2	<0.2
31	Total Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8
32	Faecal Coliform	APHA 9221 B	MPN/100 ml	Absent	Absent	<1.8	<1.8	<1.8

PREPARED BY
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(Executive)

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