SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENT CLEARANCE (EC) FOR TALABIRA OPENCAST COAL MINE PROJECT At Village Khinda, Tehsil Rengali, District Sambalpur, Odisha

Submitted to: Eastern Regional Office Ministry of Environment, Forest & Climate Change, Central Pollution Control Board, New Delhi & Odisha State Pollution Control Board, Bhubaneswar

Submitted by: Environment Management Department Raipur Energen Limited Adani Corporate House, Shantigram SG Highway, Ahmedabad- 382 421

October’2020 – March’2021
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INTRODUCTION

M/s Hindalco Industries Ltd. had obtained an Environmental Clearance (EC) for expansion of Talabira-I Opencast Coal mine Project (1.5 MTPA to 3.0 MTPA) in an area of 170.30 Ha. at village Khinda, Tehsil Rengali, District Sambalpur, Odisha vide letter No. J-11015/58/2009-IA.II (M) dated 08th November, 2011.


In this regards, Ministry of Coal vide Vesting Order under clause (b) of sub-rule (2) of rule 7 and sub-rule (1) of rule 13 and Order no. 104/2/2015/NA dated 23rd March, 2015 allocated Talabira-I Coal Mines to M/s GMR Chhattisgarh Energy Limited, as successful bidder.


The name of the company has been changed from M/s GMR Chhattisgarh Energy Limited to Raipur Energeng Limited with effect from 20th August 2019 and it is to note that Raipur Energeng Limited is 100% subsidiary of Adani Power Limited.

Raipur Energeng Limited has also obtained EC transfer from MoEF&CC for Talabira-I Opencast Coal Mine vide letter no. J-11015/58/2009-IA.II (M) dated 04.11.2020

Currently, Talabira-I Opencast Coal Mine is not operational.
**Compliance Status of Environmental Clearance granted for Talabira Coal Mine**

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<tr>
<td>A.</td>
<td>Specific Conditions</td>
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<td>(i)</td>
<td>Production of coal shall not exceed 3.0 MTPA. The project proponent shall obtain prior EC for expansion in production beyond 3.0 MTPA.</td>
<td>Coal production is nil during the period of October’2020 to March’2021</td>
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<td>(ii)</td>
<td>No coal washery shall be established without prior EC from this MOEF.</td>
<td>Complied</td>
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<td>No washery has been established at Mine site till date.</td>
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<td>(iii)</td>
<td>No fly ash shall be dumped into the de-coaled voids without prior approval of the MOEF.</td>
<td>Being Complied</td>
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<td>No fly ash is dumped into the de-coaled voids till date. No fly ash will be dumped without prior approval from MoEF &amp; CC.</td>
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<td>(iv)</td>
<td>The embankment shall be stabilised with stone pitching on the reservoir side and compacted and plantation using a mix of native species shall be developed. Additional safety and protection measures including continued operation of high capacity pumps shall be in operation to prevent mine inundation. Prior approval of disaster management plan shall be obtained.</td>
<td>As per initial EC dated 08/11/2011, originally issued to M/s Hindalco Industries Ltd, embankment related activities have already been executed by the prior Mine Allottee (M/s Hindalco) under the guidance of DoWR, Odisha. The embankment is of 1.92 Km length and 1.5 m height and 10 m wide at the top and 3 m above the HFL of Hirakud Reservoir. The embankment has been stabilised with side-sloping on either side and plantation using a mix of native species is developed. There is a provision of high capacity pump for de-watering. The disaster management plan is in place and submitted to directorate of Mines Safety also</td>
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<td>(v)</td>
<td>Top soil, if generated, should be properly stacked with proper slope at earmarked dump site (S) with adequate measures and shall be used for reclamation and development of green belt and for reclamation of back filled quarry should be used for reclamation and rehabilitation of mined out areas within a year of generation.</td>
<td>Complied</td>
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<td>After taking over of Mines by M/s GMR Chhattisgarh Energy Limited, topsoil of 8,000 Cubic Meter had been spread over the external dump slope to facilitate Bio-reclamation and 12,000 Cubic Meter has been conserved in external Top soil dump and 8,925 Cubic meter has been preserved and properly stacked in internal top soil dump up to 31st March 2018. Reclamation of back filled quarry and...</td>
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<td>(vi)</td>
<td>The entire OB generated in the expansion project shall be back filled and reclaimed and stabilized with plantation using a mix of species found in the reserve forests in the buffer zone. Monitoring and management of the existing reclaimed dump site shall continue until the vegetation becomes self-sustaining and no dumping of OB on reclaimed dumps shall be permitted. Compliance status shall be submitted to the Ministry of Environment &amp; Forests and its Regional Office located at Bhubaneswar on yearly basis.</td>
<td>OB generated by prior allottee was stacked in three external dumps (Dump- 1, Dump- 2 &amp; Dump- 3). Mine closure activities such as back filling, reclamation &amp; stabilization with plantation will be done as per approved Mine Plan &amp; Mine closure plan and status of compliances will be submitted to the Ministry of Environment &amp; Forests and its Regional Office located at Bhubaneswar on yearly basis.</td>
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<td>(vii)</td>
<td>Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de - silted and maintained properly. Garland drains (Size, Gradient &amp; Length) and sump capacity shall be designed keeping 50% safety margin over &amp; above the peek sudden rain fall and maximum discharge in the area adjoining the mine site. Sump capacity also provide adequate retention period to allow proper settling of silt material.</td>
<td>Being Complied Catch drains of average width 2.5 m and length 2.9 Km had been constructed and maintained along the toe of OB dumps. Water is collected in mine sump which is being utilized for water spraying in mine area, roads, green belt development etc. The drains are cleaned before every monsoon and maintained properly. Garland drains &amp; sump capacity are designed by taking factor of safety 2.0 to deal with the sudden rain fall. There are no adjoining mines.</td>
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<td>(viii)</td>
<td>Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check the run-off and siltation shall be based on the rain fall data.</td>
<td>Complied Retaining wall at the toe of the dumps and OB benches within the mine to check the run-off and siltation is done by prior allottee. Maintenance &amp; periodic repair of retaining wall has been undertaken by Raipur Energen Limited (Erstwhile, GMR Chhattisgarh Energy Limited).</td>
</tr>
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<td>(ix)</td>
<td>Mist type water sprinkling system shall be provided to check fugitive emissions from conveyor system, haulage roads, transfer points etc. Water sprinkling (Fixed &amp; Mist type, mobile) shall be regularly carried out along the main haul roads.</td>
<td>There is no conveyor system in Talabira-1 mine. Mine operations are temporarily suspended/ hold. During mine operation, mist type mobile tankers are used for water sprinkling along haul roads, stock yards, transfer points etc.</td>
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<td>(x)</td>
<td>No blasting shall be carried out.</td>
<td>Complied No blasting practice is adopted in mine.</td>
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<td>(xi)</td>
<td>A feasibility plan for transportation of coal to the railway siding by closed overhead conveyors shall be prepared and furnished to the MOEF within 6 months.</td>
<td>Feasibility plan for transport of coal to railway siding by closed overhead conveyor has been submitted by M/s REL after taking over the mine in April 2015.</td>
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<td>(xii)</td>
<td>Area brought under afforestation shall not be less than 137.905 Ha which includes reclaimed external OB dump area (45 Ha), backfilled area (60 Ha), along ML boundary, green belt (28.905 Ha) and top soil dump area (6.0 Ha) by using a mix of species found in the natural forests in the buffer zone in consultation with the local DFO / Agricultural department. The density of the trees shall be around 2500 plants per Ha.</td>
<td>37940 No's of additional saplings were planted by REL in addition to Green belt area developed. Total 33.79 Ha within mining lease area is covered with plantation. Back filling, Reclamation &amp; plantation work will be carried out as per approved mine plan &amp; mine closure plan after exhaustion of coal in mine.</td>
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<td>(xiii)</td>
<td>A progressive mine closure plan shall be implemented and OB generated during the balance life of the mine shall be concurrently back filled and the area reclaimed with a mix of native species and at the end of mine life the balance area 24.4 Ha of de-coaled void shall also be reclaimed with the OB and the entire worked out area shall be back filled up to ground level. There shall be no water body created at the post – mining stage.</td>
<td>Back filling in de-coaled void, reclamation &amp; plantation work will be carried out as per approved mine plan &amp; mine closure plan. Revised Mining plan and mine closure plan submitted in October 2016 was not approved. The existing mine plan &amp; mine closure plan is already expired on 31.03.2018. As on date, company is not authorized to take any activity related to mining in mine, without approved mining plans from Ministry of Coal for Talabira-1 mine.</td>
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<td>(xiv)</td>
<td>A conservation plan comprising for in-situ and ex-situ conservation of schedule I and II, Fauna found within the core &amp; buffer zone shall be implemented in consultation with the State Govt. for the balance life of the project and include a plan for habitat restoration at the post mining stage and which also includes a plan for development of 150 Ha of grass lands for the elephants visiting the area. The activities there under along with status of implementation (including expenditure) shall be regularly reported as part of the compliance reports furnished to MOEF RO, Bhubaneswar and also uploaded on the company website.</td>
<td>Complied. Conservation plan including plan for habitat restoration at post mining stage has been prepared which is duly approved by Chief Wildlife Warden (CWLW). Approved amount of Rs.257 Lacs has been deposited with PCCF, Orissa for implementation of above conservation plan. Conservation plan and status of implementation were submitted to RO MOEFC, Bhubaneswar and also uploaded on our website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a> Approved plan, Approval letter of conservation plan, payment letter for implementation of conservation plan, Screenshot of the web link was submitted with previous compliance report.</td>
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<td>(xv)</td>
<td>Regular monitoring of ground water level on the quality shall be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity shall be done four times in a year pre-monsoon (May), monsoon (August), Post-Monsoon (November) and winter (January).</td>
<td>A NABL accredited testing agency has been appointed for monthly monitoring of the ground water. It is being collected from the existing wells at the nearby villages and also from piezometer installed in front of site office of Talabira-1 mine.</td>
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<td>Analysis of ground water is being done by NABL certified lab and report is being submitted on half yearly basis to the office. Environmental monitoring report for the period of Oct’20 to Mar’21 is enclosed as <strong>Annexure I</strong>. Six monthly compliance report including environmental monitoring report has been uploaded on the company website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>(xvi)</td>
<td>The extent of use of water in the mining operations shall be reduced by recycling and reuse. The company shall put up artificial ground water recharge measures for augmentation of water resource if the water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine. Mine water to be discharged into the Hirakud reservoir shall be treated to prescribed standards before discharge. Only stagnated water in the sump of mine is being used for mining operations and plantation. Water is contained in the pits within ML, which facilitates recharging the ground water. Hirakud reservoir backwater is adjacent to the mine. Hence, ground Water table varies according to the level of Hirakud reservoir back water. REL is supplying water to nearby villages by 6 no’s of water tankers throughout the year. Water from mine is not being discharged to Hirakud Reservoir.</td>
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<td>(xvii)</td>
<td>Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any through any local/regional health institutions and the results reported to the this ministry and to DGMS. Being Complied Periodic health check- up including occupational disease and hearing impairment was done as per Rule 29 (b) of Mining Rules, 1955. There was no occupational disease and hearing impairment to any workers.</td>
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<td>(xviii)</td>
<td>For monitoring land use pattern and for post-mining land use, time series of land use maps, based on satellite imagery (on a scale of 1:5000) of the core zone and buffer zone, from the start of the project, until the end of the mine life shall be prepared once in three years (for any one particular season which is consistent in the time series), and the report submitted to MOEF and its regional office at Bhubaneswar. The land use analysis based on satellite imagery for core zone of the mine including the land use of 10 km buffer zone has been done for 2015 and 2018 and the same has already been submitted.</td>
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<td>(xix)</td>
<td>A detailed Final Mine Closure Plan along with details of corpus fund submitted to the Ministry of Environment &amp; Forest which shall be implemented from 2017-18. The time period for reclamation shall be completed within a year of completion of project. The plan for habitat restoration plan for a minimum period All the provisions of mine closure plan will be implemented after the approval of mine plan and mine closure plan as previous plan is expired on 1st April’2018.</td>
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<td>of five years (under the MMDR Act) shall be undertaken after completion of reclamations in consultation with and a joint inspection carried with the state forest department.</td>
<td>Compliance assured, Budgetary provision of @ Rs 10/ Ton of coal was kept. Mine operations are temporarily suspended since 1st April’ 2018. Preliminary report on socio-economic development of the villages has been prepared and submitted with previous compliance report. Socio economic development assessment in the area every three years after the approval of revised mining plan will be implemented.</td>
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<td>(xx)</td>
<td>CSR would be implemented in 8 villages – Talabira, Nua Khinda, Purana Khinda, Lapanga, Bhudiapalli, Matul Camp, Behara Munda and Mundapara. Budgetary provisions at @ Rs. 10 per tonne of Coal should be made for CSR activities. The socio-economic development of the villages shall be monitored over the life of the project using UNDP. Human development indices and reported as part of the report submitted to MOEF RO, Bhubaneswar.</td>
<td>Being Complied Five numbers Ambient air quality monitoring stations are established in core zone as well as in the buffer zone for monitoring PM10, PM 2.5, SO2, NOx and heavy metals such as Hg, Pb, Cr, As etc. Location of the stations shall be decided based on Meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the state pollution control board. Recent Environmental Report is uploaded in company website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>B.</td>
<td>General Conditions</td>
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<td>(i)</td>
<td>No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment and Forest.</td>
<td>Complied There is no change in mining technology in mines.</td>
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<td>(ii)</td>
<td>No change in the calendar plan including excavation, quantum of mineral coal and waste shall be made.</td>
<td>Complied Adhered to the mine plan.</td>
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<td>(iii)</td>
<td>Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for monitoring PM10, PM 2.5, SO2, NOx and heavy metals such as Hg, Pb, Cr, As etc. Location of the stations shall be decided based on Meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the state pollution control board.</td>
<td>Being Complied Data on ambient air quality (PM10, PM 2.5, SO2, NOx and heavy metals such as Hg, Pb, Cr, As etc.) shall be regularly submitted to the ministry including its regional office at Bhubaneswar and to the State Pollution Control Board and Central pollution Control Board once in Six Months.</td>
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<td>(iv)</td>
<td>Data on ambient air quality (PM10, PM 2.5, SO2, NOx and heavy metals such as Hg, Pb, Cr, As etc.) shall be regularly submitted to the ministry including its regional office at Bhubaneswar and to the State Pollution Control Board and Central pollution Control Board once in Six Months.</td>
<td>Being Complied Data on ambient air quality (PM10, PM 2.5, SO2, NOx and heavy metals such as Hg, Pb, Cr, As etc.) is being monitored on quarterly basis by external agency (Approved by MoEFCC / NABL Accredited) and report is being submitted to MOEFC, Bhubaneswar on quarterly basis. Recent Environmental Report is uploaded in company website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>(v)</td>
<td>Fugitive dust emissions quality (PM10, PM 2.5 and heavy metals such as Hg, Pb, Cr, As etc.) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul road, wagon loading and dump trucks (Loading &amp; un loading) points shall be provided and properly maintained.</td>
<td>Being Complied Fugitive dust emissions quality (PM10, PM 2.5 and heavy metals such as Hg, Pb, Cr, As etc.) from all the sources are being monitored by external agency (Approved by MOEF / NABL) and reports are being submitted. During mine operation, water spraying arrangement on haul road, wagon loading and dump trucks (Loading &amp; un-loading) points were provided and maintained. Recent Environmental Report is uploaded in company website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>(vi)</td>
<td>Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc. shall be provided with ear plugs/muffs.</td>
<td>Noise within ML is well below the stipulated norms. Ear plugs/muffs are also provided to HEMM operators. No drilling &amp; blasting is practiced in mine.</td>
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<td>(vii)</td>
<td>Industrial waste water (workshop and waste water from the mine) shall be properly collected, treated so as to confirm to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.</td>
<td>Grease and Oil Trap has been provided in the workshop to treat the waste water. The treated water is being stored and reused for water spraying and cleaning of vehicles in the wash bay.</td>
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<td>(viii)</td>
<td>Vehicular emissions shall be kept under control and regularly monitored.</td>
<td>Being Complied During the mine operation, regular maintenance of vehicles was being done to control the vehicular emissions.</td>
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<td>(ix)</td>
<td>Environmental laboratory shall be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.</td>
<td>Environmental monitoring and analysis is being carried out by external agency approved by MOEF/ NABL Accredited Environment Monitoring Report is uploaded in company website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>(x)</td>
<td>Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of worker shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed. A separate environmental management cell with suitable qualified personnel shall be set up under the control of</td>
<td>Being Complied Dust masks were issued to all employees working in dusty environment. Initial &amp; refresher training was imparted to contractual employees as per Mines Vocational Rules 1966, Periodical Medical Examination of 140 no’s of employees were conducted to observe any contractions due to exposure to dust.</td>
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### Conditions and Compliance Status

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<td>(xi)</td>
<td>The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted to other purpose. Year-wise expenditure shall be reported to this Ministry and its Regional Office at Bhubaneswar.</td>
<td>Being Complied REL has earmarked a separate budget for environmental protection measures. Mine operations are temporarily suspended since 1st April' 2018.</td>
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<tr>
<td>(xii)</td>
<td>A copy of the environmental clearance shall be marked to concerned Panchayat / local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.</td>
<td>This EC was originally issued to M/s Hindalco in 2011 and in 2015 the EC was transferred to M/s REL (Formerly GMR Chhattisgarh Energy Ltd). Copy of the Environmental Clearance (EC) and Public Notice Advertisements in Newspapers related to EC have been displayed in Panchayat Office, Khinda and Sambalpur.</td>
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<td>(xiii)</td>
<td>State Pollution Control Board shall display a copy of clearance letter at the Regional Office, District Industry Centre and Collectors Office/ Tehsil Office for 30 days.</td>
<td>Complied</td>
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<td>(xiv)</td>
<td>The project authorities shall advertise at least in two local newspapers widely circulated around the projects, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of clearance letter is available with State Pollution Control Board and may also been seen at the website of the Ministry of Environment &amp; Forrest at <a href="http://envfor.nic.in">http://envfor.nic.in</a>. The compliance status including data on monitoring of environmental quality (air, water and noise) shall also be uploaded by the project authorities in their website and also at their main gate of project premises and office so as to bring the same in the public domain.</td>
<td>Advertisements have been published in two local newspapers of Odisha state namely Samay (Dt.01.10.2016, Odia newspaper) and in Dainik Jagaran (Dt.01.10.2016, Hindi newspaper). Data on monitoring of environmental quality (Air, water &amp; noise) and status of compliance have been uploaded in the company’s website. <a href="https://adanipower.com/Downloads">https://adanipower.com/Downloads</a></td>
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<td>(3)</td>
<td>The Ministry or any other competent authority may stipulate any further condition for environmental protection.</td>
<td>Noted and agreed</td>
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<td>(4)</td>
<td>Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.</td>
<td>Noted</td>
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<td>(5)</td>
<td>The above conditions will be enforced inter-alia, under the provisions of the Water (Prevention &amp; Control of Pollution) Act, 1974, the Air (Prevention &amp; Control of Pollution) Act,</td>
<td>Noted and agreed</td>
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<td>1981, the Environment (Protection) Act, 1986 and the Public Liability Insurance Act, 1991 along with their amendments and Rules. The proponent shall ensure to undertake and provide for costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water and occupation and other diseases due to the mining operations.</td>
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<td><strong>EC Transferred / Amendment dated 16.04.2015</strong></td>
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<td>(i)</td>
<td>(i) Any change in scope of work will attract the provisions of Environment Protection Act (EPA), 1986 and Environmental Impact Assessment Notification, 2006 in conjunction with the subsequent amendments / circular.</td>
<td>Noted and agreed</td>
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<tr>
<td>(ii)</td>
<td>All conditions stipulated in the EC Letter no. J-11015/58/2009-IA.II (M) dated 08th November, 2011 shall remain unchanged</td>
<td>Noted &amp; compliance assured</td>
</tr>
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<td>(iii)</td>
<td>The successful bidder shall be liable, if any, for any act of violation of the EPA 1986 / EIA Notification 2006 / subsequent amendments and circulars which it has inherited during the transfer.</td>
<td>As per the para no (3) of Section 14 of The Coal Mines (Special Provisions) Act, 2015, “Every liability of any prior allottee in relation to a Schedule I coal mine in respect of any period prior to the vesting order or allotment order, shall be the liability of such prior allottee and shall be enforceable against it and not against the successful bidder or allottee or the Central Government”.</td>
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<td>(iv)</td>
<td>Successful bidder shall be liable for compliance of all court directions, if any.</td>
<td>Noted &amp; compliance assured</td>
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Test Report

Sample Number : VEL/RELM/AA/01
Name & Address of the Party : M/s Raipur Energien Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG) Talabira Mines

Report No. : VEL/A/2010310003/A
Format No. : 7.8 F-01
Party Reference No. : NIL
Report Date : 10/11/2020
Period of Analysis : 31/10/2020 - 10/11/2020
Receipt Date : 31/10/2020

Sample Description : AMBIENT AIR

General Information
Sampling Location : Rest Shalter 1.5 K.M. in SE From The mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VELJAI/RDS/FPS/17
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 24/10/2020 To 25/10/2020
Time of Monitoring : 11.30 TO 11.30 Hrs.
Ambient Temperature (°C) : Min. 19° Max 31°
Surrounding Activity : Human & Vehicular Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>72.07</td>
<td>µg/m³</td>
<td>100</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>38.66</td>
<td>µg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>18.26</td>
<td>µg/m³</td>
<td>80</td>
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<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.22</td>
<td>µg/m³</td>
<td>80</td>
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<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (&quot;DL 0.02 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (&quot;DL1.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit **DL Detection Limit

***End of Report***

(Checked By)

(Approved By)

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Note: Terms & conditions refer on backside of test report.
**Test Report**

Sample Number: VEL/RELM/AA/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description: AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>Test</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rest Shalter 1.5 K.M. in SE From The mine</td>
<td>Test Method</td>
<td>BDL (&quot;DL.1.0 ng/m^3&quot;)</td>
<td>µg/m^3</td>
<td>--</td>
</tr>
</tbody>
</table>

**Notes:**
- *BDL-Below Detection Limit*  
- *DL Detection Limit*  

***End of Report***

(Checked By)

(Approved By)

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/RELM/AA/02  
**Name & Address of the Party:** M/s Raipur Energex Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines  
**Report No.:** VEL/A/2010310004/A  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 10/11/2020  
**Period of Analysis:** 31/10/2020-10/11/2020  
**Receipt Date:** 31/10/2020

**Sample Description:** AMBIENT AIR

### General Information
- **Sampling Location:** R & R Colony, 3.2 KM In NE From The Mines
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VELJAI/RDS/FPS/18
- **Instrument Calibration Status:** Calibrated
- **Latitude:** ---
- **Longitude:** ---
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 24/10/2020 To 25/10/2020
- **Time of Monitoring:** 11.30 TO 11.30 Hrs.
- **Ambient Temperature (°C):** Min. 18° Max 31°
- **Surrounding Activity:** Human & Vehicular Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>71.62</td>
<td>µg/m³</td>
<td>100</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>32.15</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>21.15</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>12.09</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (<em>DL 0.02 µg/m³</em>)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (<em>DL 1.0 ng/m³</em>)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td></td>
</tr>
</tbody>
</table>

BDL- Below Detection Limit  **DL Detection Limit  **

***End of Report***

(Checked By)

(Approved By)

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**Note:** Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

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Test Report

Sample Number : VEL/RELM/AA/02
Name & Address of the Party : M/s Raipur Energenc Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG) Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : R & R Colony, 3.2 KM In NE From The Mines
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEJUJAI/RDS/FPJ/18
Instrument Calibration Status : Calibrated
Latitude : ---
Longitude : ---
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 24/10/2020 To 25/10/2020
Time of Monitoring : 11.30 TO 11.30 Hrs.
Ambient Temperature (°C) : Min. 18° Max 31°
Surrounding Activity : Human & Vehicular Activity
Scope of Monitoring : Regulatory Requirment
Sampling & Analysis Protocol : IS :5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>µg/m³</td>
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</table>

BDL- Below Detection Limit **DL Detection Limit

***End of Report***

(Checked By)

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/RELM/AA/03  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Report No.:** VEL/A/2010310005/A  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 10/11/2020  
**Period of Analysis:** 31/10/2020-10/11/2020  
**Receipt Date:** 31/10/2020

**Sample Description:** AMBIENT AIR

### General Information

- **Sampling Location:** Vill.-Khinda, 3 KM In SE From The Mine
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/JAI/RDS/FPS/19
- **Instrument Calibration Status:** Calibrated
- **Latitude:** ---
- **Longitude:** ---
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 24/10/2020 To 25/10/2020
- **Time of Monitoring:** 12.45 TO 12.45 Hrs.
- **Ambient Temperature (°C):** Min. 19° Max 31°
- **Surrounding Activity:** Human & Vehicular Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>69.95</td>
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<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>41.81</td>
<td>μg/m³</td>
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<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006,RA.2017</td>
<td>18.24</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>12.14</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (<em>DL 0.02 μg/m³</em>)</td>
<td>μg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (<em>DL1.0 ng/m³</em>)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>μg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

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**VARDAN ENVIROLAB**

(Approved By)

(Checked By)

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**Note:** Terms & conditions refer on backside of test report

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E-mail: jaipur@vardanvironet.com

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Test Report

Sample Number : VEL/RELM/AA/03
Name & Address of the Party : M/s Raipur Energy Limited
   Village: Raikheda, Block-Tilda Dist. Raipur -493225
   (CG) Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Vill.-Khinda, 3 KM in SE from The Mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/FPS/19
Instrument Calibration Status : Calibrated
Latitude : ---
Longitude : ---
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 24/10/2020 To 25/10/2020
Time of Monitoring : 12.45 TO 12.45 Hrs.
Ambient Temperature (°C) : Min. 19° Max 31°
Surrounding Activity : Human & Vehicular Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5162
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
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<th>S.No.</th>
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<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (*DL 1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Checked By)
## Test Report

**Sample Number:** VEL/RELMAA/04  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG)Talabira Mines

**General Information**
- Weight Bridge 0.5 KM In South From The Mines
- VEL Team
- RDS/FPS
- VEL/JAI/RDS/FPS/17
- Calibrated
- --
- Clear Sky
- 25/10/2020 To 26/10/2020
- 10.00 TO 10.00 Hrs.
- Min. 18° Max 31°
- Human, Vehicular & Mining Activity
- Regulatory Requirement
- IS :5182
- 24 Hrs.
- As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>62.21</td>
<td>µg/m³</td>
<td>100</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>24.61</td>
<td>µg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>18.04</td>
<td>µg/m³</td>
<td>80</td>
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<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>8.80</td>
<td>µg/m³</td>
<td>80</td>
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</tbody>
</table>

**End of Report***

(Checked By)

(Approved By)

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**Note:** Terms & conditions refer on backside of test report.

Phone: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanvironet.com

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## Test Report

**Sample Number:** VEL/REL/M/A/05  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CO) Talabira Mines  

**General Information**  
- **Sampling Location:** Near Petrol Pump  
- **Sample Collected by:** VEL Team  
- **Sampling Equipment used:** RDS/FPS  
- **Instrument Code:** VEL/JAI/RDS/FPS/18  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 25/10/2020 To 26/10/2020  
- **Time of Monitoring:** 11.30 TO 11.30 Hrs.  
- **Ambient Temperature (°C):** Min. 18° Max 31°  
- **Surrounding Activity:** Human, Vehicular Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS : 5182  
- **Sampling Duration:** 24 Hrs.  
- **Parameter Required:** As Per Work Order  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM - 10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>70.30</td>
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<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>40.32</td>
<td>µg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>20.37</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>11.75</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (*DL 0.02 µg/m²)</td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd Ed.,1988, Method No.302</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td></td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>—</td>
</tr>
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</table>

BDL - Below Detection Limit  ** DL Detection Limit  

***End of Report***

(Checked By)

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/RELM/AA/05
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG)/Talabira Mines

Report No.: VEL/A/2010310007/B
Format No.: 7.8 F-01
Party Reference No.: NIL
Report Date: 10/11/2020
Period of Analysis: 31/10/2020-10/11/2020
Receipt Date: 31/10/2020

Sample Description: AMBIENT AIR

General Information
Sampling Location: Near Petrol Pump
Sample Collected by: VEL Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/JAI/RDS/FPS/18
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 25/10/2020 To 26/10/2020
Time of Monitoring: 11.30 TO 11.30 Hrs.
Ambient Temperature (°C): Min. 18° Max 31°
Surrounding Activity: Human, Vehicular Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS :5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.317</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL- Below Detection Limit ** DL Detection Limit

***End of Report***

(Checked By)

(Approved By)

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Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/RELM/AA/06
Name & Address of the Party: M/s Raipur Energen Limited
Village: Kaikheda, Block-Tilda Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description: AMBIENT AIR

General Information
Sampling Location: Near Petrol Pump
Sample Collected by: VEL Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/JAI/RDS/FPS/19
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 25/10/2020 To 26/10/2020
Time of Monitoring: 12.39 TO 12.40 Hrs.
Ambient Temperature (°C): Min. 18° Max 31°
Surrounding Activity: Human, Vehicular Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA.2017</td>
<td>59.34</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA.2017</td>
<td>36.41</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>15.19</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA.2017</td>
<td>10.43</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

(Checked By)

(Approved By)

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/RELMA/AA/07
Name & Address of the Party : M/s Raipur Energex Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG) Talabra Mines

Report No. : VEL/A/2010310009/B
Format No. : 7.8 F-01
Party Reference No : NIL
Report Date : 10/11/2020
Period of Analysis : 31/10/2020-10/11/2020
Receipt Date : 31/10/2020

Sample Description : AMBIENT AIR

General Information
Sampling Location : A1 Downwind point of Talabra -1 Mine Area
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/FPS/17
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --

Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 26/10/2020 To 27/10/2020
Time of Monitoring : 10.40 TO 10.40 Hrs.
Ambient Temperature (°C) : Min. 19° Max 31°

Surrounding Activity : Human, Vehicular & Mining Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS:5182 (P-11):2006, RA 2017</td>
<td>BDL (&quot;DL1.0 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5182(P-12):2004</td>
<td>*BDL (&quot;**DL-5.0ng/m³&quot;)</td>
<td>ng/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Checked By)

Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/RELM/AA/08

**Name & Address of the Party:** M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG)/Talabira Mines

**Report No.:** VEL/A/2010310010/A

**Format No.:** 7.8 F-01

**Party Reference No.:** NIL

**Report Date:** 10/11/2020

**Period of Analysis:** 31/10/2020-10/11/2020

**Receipt Date:** 31/10/2020

**Sample Description:** AMBIENT AIR

**General Information**

- In front of the mine

**Sampling Location**

- VEL Team

**Sample Collected by**

- RDS/FPS

**Sampling Equipment used**

- VELJAI/RDS/FPS/18

**Instrument Code**

- Calibrated

**Instrument Calibration Status**

- ---

**Latitude**

- ---

**Longitude**

- ---

**Meteorological condition during monitoring**

- Clear Sky

**Date of Monitoring**

- 26/10/2020 To 27/10/2020

**Time of Monitoring**

- 11.00 TO 11.00 Hrs.

**Ambient Temperature (°C)**

- Min. 19° Max 31°

**Surrounding Activity**

- Human, Vehicular & Mining Activity

**Scope of Monitoring**

- Regulatory Requirement

**Sampling & Analysis Protocol**

- IS : 5182

**Sampling Duration**

- 24 Hrs.

**Parameter Required**

- As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>67.02</td>
<td>μg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2001, RA. 2017</td>
<td>33.93</td>
<td>μg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>18.24</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>10.04</td>
<td>μg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Checked By)

(Approved By)

**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/RELJAN/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9976
Instrument Used: SLM

General Information
Sampling Location: In Front Of Mine Office
Instrument Code: VEL/LAI/SLM/03
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 24/10/2020 To 25/10/2020
Time of Monitoring: 06.00 TO 08.00 Hrs.
Ambient Temperature (°C): Min. 19° Max 31°
Surrounding Activity: Human, Vehicular & Mining Activity
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>58.32</td>
</tr>
</tbody>
</table>

Category of Zones

<table>
<thead>
<tr>
<th>Category of Zones</th>
<th>Leq in dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, luidspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

***End of Report***

(Checked By)

www.vardan.co.in

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
# Test Report

**Sample Number:** VEL/REL/AN/02  
**Name & Address of the Party:** M/s Raipur Enrgen Limited  
Village: Raikcheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Sample Description:** Ambient Noise  
**Scope of Monitoring:** Regulatory Requirement  
**Protocol Used:** IS 9989: 9876  
**Instrument Used:** SLM  
**General Information**  
- **Sampling Location:** Near Petrol Pump  
- **Instrument Code:** VEL/JAI/SLM/03  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 25/10/2020 To 26/10/2020  
- **Time of Monitoring:** 06.00 TO 06.00 Hrs.  
- **Ambient Temperature (°C):** Min. 18° Max 31°  
- **Surrounding Activity:** Human & Vehicular Activity  
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>55.88</td>
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**Category of Zones**

<table>
<thead>
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</thead>
<tbody>
<tr>
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<td>Day</td>
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<tr>
<td>Industrial</td>
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<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, luddspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

***End of Report***

(Checked By)

(Approved By)

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**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/RELJAN/03
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description : Ambient Noise
Scope of Monitoring : Regulatory Requirement
Protocol Used : IS 9989: IS 9876
Instrument Used : SLM

General Information
Sampling Location : Near Weight Bridge
Instrument Code : VEL/JAI/SLM/03
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 26/10/2020 To 27/10/2020
Time of Monitoring : 06.00 TO 06.00 Hrs.
Ambient Temperature (°C) : Min. 19° Max 31°
Surrounding Activity : Human & Vehicular Activity
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>58.23</td>
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Category of Zones

<table>
<thead>
<tr>
<th>Category</th>
<th>Leq in dB(A)</th>
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</thead>
<tbody>
<tr>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

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***End of Report***

(Approved By)

(Checked By)

Note: Terms & conditions refer on backside of test report.

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Page No. 1/1

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
# Test Report

**Sample Number:** VEL/RELM/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Village:** Raikheda, Block-Tilda Dist. Raipur -493225 (CG) Talabira Mines  
**Sample Description:** GROUND WATER  
**Location:** R & R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 Reaff. 2017</td>
<td>7.48</td>
<td>--</td>
<td>6.5 to 8.5</td>
</tr>
<tr>
<td>2</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (P-16): 1984 Reaff 2017</td>
<td>229.00</td>
<td>mg/l</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS 3025 (Part 23): 1986, Reaff. 2019</td>
<td>121.20</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS 3025 (Part 21): 2009, Reaff. 2019</td>
<td>150.48</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS 3025 (Part 34): 1988, Reaff. 2019</td>
<td>2.61</td>
<td>mg/l</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS 3025 (Part 32): 1988, Reaff. 2019</td>
<td>40.80</td>
<td>mg/l</td>
<td>250</td>
</tr>
<tr>
<td>7</td>
<td>Sulphate (as SO4)</td>
<td>IS 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method</td>
<td>11.99</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS 3025 (Part 40): 1991 Reaff. 2019</td>
<td>58.73</td>
<td>mg/l</td>
<td>75</td>
</tr>
<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)</td>
<td>BDL (**DL- 2 mg/l)</td>
<td>mg/l</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4500 FD</td>
<td>0.22</td>
<td>mg/l</td>
<td>1.0</td>
</tr>
<tr>
<td>11</td>
<td>Total Iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>BDL (**DL- 0.1mg/l)</td>
<td>mg/l</td>
<td>0.3</td>
</tr>
<tr>
<td>12</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>BDL (**DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
<tr>
<td>13</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>BDL (**DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.001</td>
</tr>
<tr>
<td>14</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
<tr>
<td>15</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (**DL-0.002 mg/l)</td>
<td>mg/l</td>
<td>0.003</td>
</tr>
<tr>
<td>16</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>BDL (**DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>17</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3111B</td>
<td>BDL (**DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>18</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (**DL-0.20 mg/l)</td>
<td>mg/l</td>
<td>5.0</td>
</tr>
<tr>
<td>19</td>
<td>Selenium (as Se)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>BDL (**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Note:** Terms & conditions refer on backside of test report.
## Test Report

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td>Acceptable Limits</td>
</tr>
<tr>
<td>21</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>*BDL (**DL-0.03 mg/l)</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>22</td>
<td>Mangenese (as Mn)</td>
<td>IS: 3025 (Part 48): 1994, Reaff. 2019 (EDTA method)</td>
<td>*BDL (**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.1</td>
</tr>
<tr>
<td>23</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017 Method No. 4500B</td>
<td>*BDL (**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.5</td>
</tr>
<tr>
<td>24</td>
<td>Phenolic Compound</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>*BDL (**DL-0.1 mg/l)</td>
<td>mg/l</td>
<td>0.001</td>
</tr>
<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS: 3025 (Part 26): 1986 RA 2019</td>
<td>*BDL (**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>


***End of Report***

(Checked By)
# Test Report

**Sample Number:** VEL/RELM/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Report No.:** VEL/W/2010310004/B  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 10/11/2020  
**Period of Analysis:** 31/10/2020-10/11/2020  
**Receipt Date:** 31/10/2020  
**Sampling Date:** 27/10/2020  
**Sampling Quantity:** 2 Ltr. + 250 ml  
**Sampling Type:** Grab

**Sample Description:** GROUND WATER  
**Location:** R & R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
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<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acceptable Limits</td>
</tr>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/10 0 ml</td>
<td>Shall not be Detectable in any 100 ml sample</td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500CN D</td>
<td>*BDL (*DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025; 1983 (P-4) RA. 2017</td>
<td>*BDL (*DL 1.0 Hazen)</td>
<td>Hazen Unit</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-6): RA. 2018</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>6</td>
<td>Taste</td>
<td>IS 3025(P-8):1984 RA. 2017</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL (*DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit.

***End of Report***

(Checked By)  

(Approved By)

---

**Note:** Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/MWW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CC) Talabra Mines  

**Sample Description:** Waste Water  
**Location:** STP Outlet  
**Sample Collected by:** VEL Team  
**Parameter Required:** As Per Work Order  
**Sampling and Analysis Protocol:** IS 3025  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 RA2017</td>
<td>7.49</td>
<td>-</td>
<td>5.5 - 9.0</td>
</tr>
<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17): 1984, RA2017</td>
<td>20.0</td>
<td>mg/l</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-39): 1991 RA 2019</td>
<td>0.8</td>
<td>mg/l</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 3025 (Part-44): 1993, RA: 2019</td>
<td>14.4</td>
<td>mg/l</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA: 2017</td>
<td>61.8</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

**Approved By:**

**Note:** Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
### Test Report

**Sample Number:** VEL/RELMS/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Sample Description:** SOIL  
**Location:** Village- Khinda  
**Sample Collected by:** VEL Team  
**Parameter Required:** As Per Work Order  
**Sampling and Analysis Protocol:** IS 2720, APHA & USDA

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH (at 25°C)</td>
<td>IS : 2720 (P-28): 1987, RA: 2016</td>
<td>7.63</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Electrical Conductivity</td>
<td>IS 14767: 2000 RA:2016</td>
<td>0.176</td>
<td>mS/cm</td>
</tr>
<tr>
<td>3</td>
<td>Bulk density</td>
<td>USDA:1954 (Page-96) RA: 2014</td>
<td>1.28</td>
<td>gm/cc</td>
</tr>
<tr>
<td>4</td>
<td>Chloride</td>
<td>USDA:1954 Method 13 (Page-98) RA: 2010</td>
<td>95.6</td>
<td>mg/kg</td>
</tr>
<tr>
<td>5</td>
<td>Calcium (as Ca)</td>
<td>Lab SOP no. VEL/STP/01: 2018</td>
<td>146.02</td>
<td>mg/kg</td>
</tr>
<tr>
<td>6</td>
<td>Sodium (as Na)</td>
<td>USDA:1954 Method 10A (Page-96) RA: 2010</td>
<td>154.03</td>
<td>mg/kg</td>
</tr>
<tr>
<td>7</td>
<td>Potassium (as K)</td>
<td>Lab SOP no. VEL/STP/01: 2018</td>
<td>112.33</td>
<td>kg/hec.</td>
</tr>
<tr>
<td>8</td>
<td>Organic Matter</td>
<td>IS 2720 (P-22) 1972 RA:2015</td>
<td>0.78</td>
<td>%</td>
</tr>
<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>Lab SOP no. VEL/STP/01: 2018</td>
<td>108.74</td>
<td>mg/kg</td>
</tr>
<tr>
<td>10</td>
<td>Available Nitrogen (as N)</td>
<td>IS : 14684,1999 RA: 2015</td>
<td>152.0</td>
<td>kg/hec.</td>
</tr>
<tr>
<td>11</td>
<td>Available Phosphorus</td>
<td>Lab SOP no. VEL/STP/01: 2018</td>
<td>40.2</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Terms & conditions refer on backside of test report.*

---

**Ph:** 0141-2983404, 9810355569, 9953147268  
E-mail: jaipur@vardanenvironet.com
# Test Report

**Sample Number:** VEL/REL/S/01  
**Name & Address of the Party:** M/s Raipur Energex Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(C/O) Talabra Mines

**Report No.:** VEL/S0/2010310001/B  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 09/11/2020  
**Period of Analysis:** 31/10/2020-09/11/2020  
**Receipt Date:** 31/10/2020  
**Sampling Date:** 27/10/2020  
**Sampling Quantity:** 2 Kg.  
**Sampling Type:** Composite  
**Packing Status:** Temp. Sealed

**Sample Description:** SOIL

**Location:** Village- Khinda  
**Sample Collected by:** VEL Team  
**Parameter Required:** As Per Work Order  
**Sampling and Analysis Protocol:** IS 2720, APHA & USDA

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colour</td>
<td>USDA:1954-Reaffirmed,2010</td>
<td>Grey</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Water holding capacity</td>
<td>USDA:1954-Reaffirmed,2010</td>
<td>46.54%</td>
<td>%</td>
</tr>
<tr>
<td>3</td>
<td>Soil Texture</td>
<td>IS:2720 (P-4) RA:2006</td>
<td>Silty Clay</td>
<td></td>
</tr>
</tbody>
</table>

***End of Report***

**Note:** Terms & conditions refer on backside of test report.

---

**Ph:** 0141-2983404, 9810355569, 9953147268  
**E-mail:** jaipur@vardanvironet.com

---

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**Test Report**

Sample Number: VEL/REL/AA/01  
Name & Address of the Party: M/s Raipur Energen Limited  
Village: Raikeda, Block: Tilda Dist. Raipur - 493225  
(CG) Talabra Mines  

Sample Description: AMBIENT AIR

**General Information**
- Sampling Location: Rest Shelter 1.5 KM. IN SE From the mine
- Sample Collected by: Vardan EnviroLab Team
- Sampling Equipment used: RDS/FFS
- Instrument Code: VELJAI/FFS/RDS/18
- Instrument Calibration Status: Calibrated
- Latitude: 
- Longitude: 
- Meteorological condition during monitoring: Clear Sky
- Date of Monitoring: 21/11/2020 To 22/11/2020
- Time of Monitoring: 10.21 to 10.01 Hrs.
- Ambient Temperature (“C): Min. 16° Max. 29°
- Surrounding Activity: Human, Vehicular & Other Activities
- Scope of Monitoring: Regulatory Requirement
- Sampling & Analysis Protocol: IS: 5162
- Sampling Duration: 24 Hrs.
- Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS: 5182 (P- 23)-2006, R.A. 2017</td>
<td>72.21</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS: 5182 (P- 24)-2019</td>
<td>37.61</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS: 5182 (P- 6)-2006 R.A. 2017</td>
<td>18.61</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS: 5182 (P- 2)-2001, R.A. 2017</td>
<td>10.12</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22): 2004 RA.2014</td>
<td>BDL (“DL 0.02 µg/m³”)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (“DL 1.0 ng/m³”)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>—</td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit  DL Detection Limit
***End of Report***

(Checked By)
Test Report

Sample Number: VEL/REL/AA/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda, Raipur - 493225
(CG)Talabra Mines

Sample Description: AMBIENT AIR

General Information:
Sampling Location: Rest Shelter 1.5 KM. IN SE From the mine
Sample Collected by: Vardan EnviroLab Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/JAI/FPS/RDS/18
Instrument Calibration Status: Calibrated
Latitude: -
Longitude: -
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 21/11/2020 To 22/11/2020
Time of Monitoring: 10.21 to 10.01 Hrs
Ambient Temperature (°C): Min. 16° Max. 29°
Surrounding Activity: Human, Vehicular & Other Activities
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS: 5182
Sampling Duration: 24 Hrs
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1998, Method No. 317</td>
<td>BDL (<em>DL1.0 ng/m³</em>)</td>
<td>ng/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

*BDL: Below Detection Limit DL Detection Limit

***End of Report***

(Checked By)

(Stamps: Approved By, Authorized Signature)

Note: Terms & conditions refer on backside of test report.

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## Test Report

**Sample Number:** VEL/REL/AA/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Rakhega, Block-Tilda Dist: Raipur - 493225  
(CO) Talabira Mines

**Sample Description:** AMBIENT AIR

### General Information

- **Sampling Location:** R & R Colony, 3.2 KM NE from the mine
- **Sample Collected by:** Vardan EnviroLab Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/JAI/FPS/RDS/17
- **Instrument Calibration Status:** Calibrated
- **Latitude:**
- **Longitude:**

### Meteorological condition during monitoring
- **Date of Monitoring:** 22/11/2020 to 23/11/2020
- **Time of Monitoring:** 10.40 to 10.12 Hrs
- **Ambient Temperature (°C):** Min 16°C, Max 29°C
- **Surrounding Activity:** Human, Vehicle & Other Activities
- **Scope of Monitoring:** Regulatory Requirement

### Sampling & Analysis Protocol

- **Sampling Duration:** 24 Hrs
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM-10)</td>
<td>IS:5182 (P-23)-2006, RA: 2017</td>
<td>73.36</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM-2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>34.26</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006, RA:2017</td>
<td>19.82</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA: 2017</td>
<td>11.83</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22); 2004 RA:2014</td>
<td>BDL (DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (DL 1.0 µg/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed., 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL Below Detection Limit; DL Detection Limit

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*(Checked By)

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*Note: Terms & Conditions refer on backside of the test report.*

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**Ph: 0141-2983404, 9810935569, 9953147268 E-mail: jaiipur@vardanenviro.net.com**
### Test Report

**Sample Number:** VEL/REL/AA/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheeda, Block-Tida Dist. Raipur -493225  
(CG) Talabra Mines

**Sample Description:** AMBIENT AIR

**General Information**
- **Sampling Location:** R & R Colony, 3.2 KM in NE from The mine
- **Sample Collected by:** Vardan EnviroLab Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/IA/FPS/RDS/17
- **Instrument Calibration Status:** Calibrated
- **Latitude:** —
- **Longitude:** —
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 22/11/2020 To 23/11/2020
- **Time of Monitoring:** 10.40 to 10.12 Hrs.
- **Ambient Temperature (°C):** Min. 16° Max. 29°
- **Surrounding Activity:** Human, Vehicular & Other Activities
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
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<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (<em>DL 1.0 ng/m³</em>)</td>
<td>ng/m³</td>
<td>—</td>
</tr>
</tbody>
</table>

*BDL Below Detection Limit DL Detection Limit

***End of Report***

(Checked By)

Page No. 1/1  
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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenviro.com
# Test Report

**Sample Number:** VEL/REL/AA/03  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Village:** Raikeda, Block-Tilda Dist. Raipur - 493225  
**CG:** Talaabira Mines  
**Sample Description:** AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
</table>
| **Sampling Location** | Village - Khinda, 3 KM in SE from the mine  
| **Sample Collected by** | Vardan EnviroLab Team  
| **Sampling Equipment used** | RDS/FPS  
| **Instrument Code** | VELUAIFPS/RDS18  
| **Instrument Calibration Status** | Calibrated  
| **Latitude** |  
| **Longitude** |  
| **Meteorological condition during monitoring** | Clear Sky  
| **Date of Monitoring** | 22/11/2020 To 23/11/2020  
| **Time of Monitoring** | 10.22 to 10.12 Hrs  
| **Ambient Temperature (°C)** | Min. 16° Max. 29°  
| **Surrounding Activity** | Human, Vehicular & Other Activities  
| **Scope of Monitoring** | Regulatory Requirement  
| **Sampling & Analysis Protocol** | IS: 5182  
| **Sampling Duration** | 24 Hrs  
| **Parameter Required** | As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA, 2017</td>
<td>69.45</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>41.28</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA, 2017</td>
<td>17.38</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA, 2017</td>
<td>11.76</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22): 2004 RA 2014</td>
<td>BDL (&quot;DL 0.02 µg/m³&quot;)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (&quot;DL1.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed. 1988, Method No.807:1988</td>
<td>BDL (DL 1.0)</td>
<td>µg/m³</td>
<td></td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit  

(End of Report)

Note: Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jajpur@vardanenviro.net
Test Report

Sample Number: VEL/REL/AA/03
Name & Address of the Party: M/s Raipur Energen Limited
Address: Village Raikeda, Block-Tilda Dist. Raipur 493225 (CG) Talabira Mines

Report No.: VEL/A/2011270003/B
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 30/11/2020
Period of Analysis: 27/11/2020-30/11/2020
Receipt Date: 27/11/2020

Sample Description: AMBIENT AIR

General Information
Sampling Location: Village - Khinda, 3 KM in SE from the mine
Sample Collected by: Vardan Envirolab Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/JAI/FPS/RDS/18
Instrument Calibration Status: Calibrated
Latitude:
Longitude:

Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 22/11/2020 To 23/11/2020
Time of Monitoring: 10.22 to 10.12 Hrs
Ambient Temperature (°C): Min. 16° Max. 29°
Surrounding Activity: Human, Vehicular & Other Activities
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS : 5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>ng/m³</td>
<td>~</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

.END OF REPORT**
Test Report

Sample Number: VEL/R/EA/04
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 493225 (CG) Talabira Mines

Sample Description: AMBIENT AIR

General Information:
Sampling Location: Village - Babu Khinda, 3 KM in NE from the mine
Sample Collected by: Vardan EnviroLab Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/JAI/FPS/RDS/19
Instrument Calibration Status: Calibrated
Latitude: 
Longitude: 
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 22/11/2020 To 23/11/2020
Time of Monitoring: 11.20 to 11.11 Hrs
Ambient Temperature (°C): Min. 16° Max. 29°
Surrounding Activity: Human / Vehicular & Other Activities
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>58.58</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>35.73</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA, 2017</td>
<td>15.05</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>10.49</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***
Test Report

Sample Number: VEL/REL/AA/05
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist, Raipur -493225 (CG)/Talabira Mines

Sample Description: AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>Weight Bridge 0.5 KM in South from the mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>-</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>VariDan Envirolab Team</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>RDS/PS</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>VEL/A1/FP/8/RDS/18</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Latitude</td>
<td>-</td>
</tr>
<tr>
<td>Longitude</td>
<td>-</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>23/11/2020 To 24/11/2020</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10.05 to 09.25 Hrs</td>
</tr>
<tr>
<td>Ambient Temperature <em>(°C)</em></td>
<td>Min 17° Max 29°</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Other Activities</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS: 5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>64.10</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>26.61</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA,2017</td>
<td>20.33</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>8.89</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

End of Report

(Checked By)

Note: Terms & conditions refer on backside of test report.

www.vardan.co.in

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenviroonet.com
# Test Report

**Sample Number**: VEL/REL/AA/06  
**Name & Address of the Party**: M/s Raipur Energen Limited  
**Report No.**: VEL/42011/17/0006/A  
**Format No.**: 7 8 F-01  
**Party Reference No.**: NIL  
**Reporting Date**: 30/11/2020  
**Period of Analysis**: 27/11/2020-30/11/2020  
**Receipt Date**: 27/11/2020

**Sample Description**: AMBIENT AIR

- **General Information**
  - Sampling Location: Near Petrol Pump
  - Sample Collected by: Vardan EnviroLab Team
  - Sampling Equipment used: RDS/FPS
  - Instrument Code: VEL/34/FPS/RDS/19
  - Instrument Calibration Status: Calibrated
  - Latitude
  - Longitude
  - Meteorological condition during monitoring: Clear Sky
  - Date of Monitoring: 23/11/2020 To 24/11/2020
  - Time of Monitoring: 09:45 to 09:42 Hrs
  - Ambient Temperature (°C): Min. 17° Max. 25°
  - Surrounding Activity: Human, Vehicular & Other Activities
  - Scope of Monitoring: Regulatory Requirement
  - Sampling & Analysis Protocol: IS:5182
  - Sampling Duration: 24 Hrs
  - Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA, 2017</td>
<td>72.66</td>
<td>μg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>38.61</td>
<td>μg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA,2017</td>
<td>20.33</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA, 2017</td>
<td>10.05</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA 2014</td>
<td>BDL (DL 0.02 μg/m³)</td>
<td>μg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed,1988, Method No.302</td>
<td>BDL (DL:1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>μg/m³</td>
<td>-</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Checked By)

[Official Seal]

VARDAN ENVIROLAB
[Approved By]

Vardan EnviroLab
Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020
MoEF & CC Recognized | ISO 9001 | ISO 45001

Note: Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jainpur@vardanenviro.net.com
# Test Report

**Sample Number:** VEL/REL/AA/06  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village Raikhetda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines  

**Report No.:** VEL/A/2011270006/B  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Reporting Date:** 30/11/2020  
**Period of Analysis:** 27/11/2020-30/11/2020  
**Receipt Date:** 27/11/2020

**Sample Description:** AMBIENT AIR

**General Information:**
- **Sampling Location:** Near Petrol Pump
- **Sample Collected by:** Vardan Envirolab Team
- **Sampling Equipment used:** RDS/IPS
- **Instrument Code:** VEL/JAI/IFS/IPS/919
- **Instrument Calibration Status:** Calibrated
- **Latitude:** ~
- **Longitude:** ~
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 23/11/2020 To 24/11/2020
- **Time of Monitoring:** 09.45 to 09.42 Hrs
- **Ambient Temperature (°C):** Min. 17° Max. 29°
- **Surrounding Activity:** Human, Vehicular & Other Activities
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS 5182
- **Sampling Duration:** 24 Hrs
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1998, Method No. 317</td>
<td>BDL (<em>DL 1.0 ng/m^3</em>)</td>
<td>ng/m^3</td>
<td>~</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit, ***End of Report***

(Checked By)

[Signature]

**Note:** Terms & conditions refer on backside of test report.

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Test Report

Sample Number: VEL/REL/AA/08
Name & Address of the Party: M/s Raipur Energex Limited
Village: Raikheda, Block-Tilda Dist Raipur-493225
(CG) Talabra Mines

Sample Description: AMBIENT AIR

General Information
Sampling Location: In front of the mine office
Sample Collected by: Vardan EnviroLab Team
Sampling Equipment used: ROSI/PS
Instrument Code: VELUM/IFS/ROS/18
Instrument Calibration Status: Calibrated

Latitude
Longitude
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 23/11/2020 To 24/11/2020
Time of Monitoring: 10.00 to 10.05 Hrs
Ambient Temperature (°C): Min. 18° Max. 31°
Surrounding Activity: Human, Vehicular & Plant Activities
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S. No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23) 2006, RA. 2017</td>
<td>68.79</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24) 2019</td>
<td>31.20</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6) 2006 RA. 2017</td>
<td>19.54</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2) 2001, RA. 2017</td>
<td>9.70</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

*End of Report*

(Checked By)

Note: Terms & conditions refer on backside of test report.

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Test Report

Sample Number: VEL/REL/AA/07
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikhed, Block-Tilda Dist. Raipur - 493225 (CG) Talabira Mines

Sample Description: AMBIENT AIR

General Information
Sampling Location: A1 Downwind point of Talabira mine Area
Sample Collected by: Vardan Envirolab Team
Sampling Equipment used: RDS/VOC
Instrument Code: VEL/JAI/VOC/01/RDS/17
Instrument Calibration Status: Calibrated
Latitude: 
Longitude: 

Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 21/11/2020 To 22/11/2020
Time of Monitoring: 09:43 to 09:38 Hrs
Ambient Temperature (°C): Min. 17° Max. 29°
Surrounding Activity: Human, Vehicular & Plant Activities
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS:5182 (P-11): 2006, RA 2017</td>
<td>BDL (&quot;DL1.0 μg/m³)</td>
<td>μg/m³</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5182 (P-12):2004</td>
<td>*BDL (&quot;DL5.0 ng/m³)</td>
<td>ng/m³</td>
<td>&quot; &quot;</td>
</tr>
</tbody>
</table>

* BDL: Below Detection Limit
DL: Detection Limit

***End of Report***

(Checked By)

Page No. 1/1

Note: Terms & conditions refer on backside of test report.

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Test Report

Sample Number: VEL/REL/AN/01
Name & Address of the Party: M/s Raipur Energy Limited
Village: Rakheda, Block-Tida Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: In front of the mine office
Instrument Code: VEL/AIR/SLM/003
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 23/11/2020 To 24/11/2020
Time of Monitoring: 06:00 to 06:00 Hrs
Ambient Temperature (°C): Min: 18° Max: 31°
Surrounding Activity: Human, Vehicle & Plant Activities
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result (dB(A))</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>Day: 60.27, Night: 49.16</td>
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</tbody>
</table>

Category of Zones:

<table>
<thead>
<tr>
<th>Zone</th>
<th>Leq in dB(A) Day</th>
<th>Leq in dB(A) Night</th>
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</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 06:00 AM to 10:00 PM
2. Night Time is reckoned between 10:00 PM to 6:00 AM
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

***End of Report***

(Checked By)

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# Test Report

**Sample Number:** VEL/REL/AN/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikmeda, Block-Tilda Dist. Raipur - 493225  
(CG)Talibira Mines

**Sample Description:** Ambient Noise  
**Scope of Monitoring:** Regulatory Requirement  
**Protocol Used:** IS 9889, IS 9876

**Instrument Used:** SLIM

**General Information**  
**Sampling Location:** Near Petrol Pump  
**Instrument Code:** VEL/3A/SLM003  
**Meteorological condition during monitoring:** Clear Sky  
**Date of Monitoring:** 22/11/2020 To 23/11/2020  
**Time of Monitoring:** 06:00 to 06:00 Hrs  
**Ambient Temperature (°C):** Min 18° Max 29°  
**Surrounding Activity:** Human, Vehicular & Plant Activities  
**Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9889 - 1981</td>
<td>57.67</td>
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**Category of Zones**  
<table>
<thead>
<tr>
<th></th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 6:00 AM to 10:00 PM
2. Night Time is from 10:00 PM to 6:00 AM
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

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End of Report

(Chaired By)

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Note: Terms & conditions refer on backside of test report.  
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Ph: 0814-3696666, 0814-2616666

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Test Report

Sample Number: VEL/REL/AN/03
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tida Dist. Raipur - 493225 (CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

Report No.: VEL/N/2011270003/A
Format No.: 7.8 F-01
Party Reference No.: NIL
Reporting Date: 30/11/2020
Receipt Date: 27/11/2020
Sampling Duration: 24 Hrs

Sample Collected by: Vardan EnviroLab Team
Instrument: Calibrated
Calibration Status: As Per Work Order

General Information
Sampling Location: Near Weight Bridge
Instrument Code: VEUJAI/SLM/03
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 21/11/2020 To 22/11/2020
Time of Monitoring: 06.00 to 06.00 Hrs.
Ambient Temperature (°C): Min 16° Max 31°
Surrounding Activity: Human, Vehicular & Plant Activities
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dBA</th>
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<tr>
<td></td>
<td></td>
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<td>Day Time</td>
</tr>
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<td>L eq</td>
<td>IS 9989 - 1981</td>
<td>58.27</td>
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Category of Zones

<table>
<thead>
<tr>
<th>Category</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

End of Report

*(Checked By)*

Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Village:** Raikhedha, Block- Tilka Dist. Raipur -493225 (CG)Talabra Mines

**Sample Description:** GROUND WATER  
**Location:** R & R Colony (Open Well)  
**Sample Collected by:** Vardan EnviroLab Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
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<tr>
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<td></td>
<td><strong>Acceptable Limits</strong></td>
</tr>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 Reaff. 1977</td>
<td>7.49</td>
<td>mg/l</td>
<td>6.5 to 8.5</td>
</tr>
<tr>
<td>2</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (P-16): 1984 Reaff. 1977</td>
<td>244.00</td>
<td>mg/l</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS 3025 (Part 23): 1986, Reaff. 1999</td>
<td>125.24</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS 3025 (Part 21): 2009, Reaff. 2019</td>
<td>150.48</td>
<td>mg/l</td>
<td>200</td>
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<tr>
<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS 3025 (Part 34): 1988, Reaff. 1999</td>
<td>3.32</td>
<td>mg/l</td>
<td>45</td>
</tr>
<tr>
<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS 3025 (Part 32): 1988, Reaff. 1999</td>
<td>48.92</td>
<td>mg/l</td>
<td>250</td>
</tr>
<tr>
<td>7</td>
<td>Sulphate (as SO4)</td>
<td>IS 3025 (Part 24): 1986, Reaff. 1999</td>
<td>12.84</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS 3025 (Part 40): 1991 Reaff. 1999</td>
<td>55.55</td>
<td>mg/l</td>
<td>75</td>
</tr>
<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)</td>
<td>2.89</td>
<td>mg/l</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4500 FD</td>
<td>0.22</td>
<td>mg/l</td>
<td>1.0</td>
</tr>
<tr>
<td>11</td>
<td>Total iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>BDL(=&quot;DL-0.1mg/l)</td>
<td>mg/l</td>
<td>0.3</td>
</tr>
<tr>
<td>12</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>BDL(&quot;DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
<tr>
<td>13</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>BDL(&quot;DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.001</td>
</tr>
<tr>
<td>14</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL(&quot;DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
<tr>
<td>15</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL(&quot;DL-0.002 mg/l)</td>
<td>mg/l</td>
<td>0.003</td>
</tr>
<tr>
<td>16</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>BDL(&quot;DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>17</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3111B</td>
<td>BDL(&quot;DL-0.02mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>18</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL(&quot;DL-0.20 mg/l)</td>
<td>mg/l</td>
<td>5.0</td>
</tr>
<tr>
<td>19</td>
<td>Selenium (as Se)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>BDL(&quot;DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Note:** Terms & conditions refer on backside of test report.
# Test Report

Sample Number:  VEL/GW/01  
Report No: VEL/W/2011270001/A  

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS: 10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>*BDL (**DL-0.03 mg/l)</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>22</td>
<td>Manganese (as Mn)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2019</td>
<td>*BDL (**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.1</td>
</tr>
<tr>
<td>23</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017</td>
<td>*BDL (**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.5</td>
</tr>
<tr>
<td>24</td>
<td>Phenolic Compound</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>*BDL (**DL-0.1 mg/l)</td>
<td>mg/l</td>
<td>0.0001</td>
</tr>
<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS 3025 (Part 26): 1986 Reaff. 2019</td>
<td>*BDL (**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL: Below Detection Limit, **DL: Detection Limit

**End of Report**

(Checked by)

[Authenticated Signature]

Page No. 2/2

Note: Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenviroinet.com
# Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Rapier Energex Limited  
Village: Raikhed, Block-Tilda Dist, Raipur - 493225  
(CG) Talabira Mines  

**Sample Description:** GROUND WATER  
**Location:** R & R Colony (Open Well)  
**Sample Collected by:** Vardan EnviroLab Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis:** IS 10500-2012  

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS-10500-2012</th>
<th>Acceptable Limits</th>
<th>Permissible Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/10 0.0 ml</td>
<td>Shall not be Detectable in any 100 ml sample</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
<td>Absent/100 ml</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500 CN D</td>
<td>*BDL ((&quot;DL-0.05 mg/l))</td>
<td>mg/l</td>
<td>0.05</td>
<td>No Relaxation</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025: 1983 (P-4) Reaff. 2017</td>
<td>*BDL ((&quot;DL-1 Hazen))</td>
<td>Hazen</td>
<td>5</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-5):2018</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Taste</td>
<td>IS 3025(P-8):1984 Reaff. 2017</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL ((&quot;DL-0.05 mg/l))</td>
<td>mg/l</td>
<td>0.2</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>


***End of Report***

(Checked By)

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Note: Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaiipur@vardanenvironet.com
## Test Report

**Sample Number:** VEL/WW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Village:** Raihneda, Block-Tilda Dst, Raipur -493225  
**CG/Talabira Mines**

**Sample Description:** Waste Water  
**Location:** STP Outlet  
**Sample Collected by:** Vardan EnviroLab Team  
**Parameter Required:** As Per Work Order  
**Sampling and Analysis Protocol:** IS 3025

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 RA2017</td>
<td>7.52</td>
<td>-</td>
<td>5.5 - 9.0</td>
</tr>
<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17); 1984, RA2017</td>
<td>21.9</td>
<td>mg/l</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-39):1991 RA 2019</td>
<td>0.8</td>
<td>mg/l</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 3025 (Part-44): 1993, RA: 2019</td>
<td>14.4</td>
<td>mg/l</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA: 2017</td>
<td>60.8</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Chrisked By)

Note: Terms & conditions refer on backside of test report.

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# Test Report

**Sample Number:** VEL/REL/A/A/01  
**Name & Address of the Party:** M/s Raipur Energet Limited  
**Village:** Raikohda, Block-Tilda Dist. Raipur -493225  
**CG(Talabira Mines)**  

**Sample Description:** AMBIENT AIR  

**General Information**  
**Sampling Location:** Rajesh Shelter 1.5 KM in SE From the Mine  
**Sample Collected by:** VEL Team  
**Sampling Equipment used:** RDS/FPSS  
**Instrument Code:** VEL/RA/31/RDS/25  
**Instrument Calibration Status:** Calibrated  
**Latitude:** --  
**Longitude:** --  
**Meteorological condition during monitoring:** Clear Sky  
**Date of Monitoring:** 19/12/2020 To 20/12/2020  
**Time of Monitoring:** 09.40 to 09.40 Hrs.  
**Ambient Temperature (°C):** Min 12 Max 25  
**Surrounding Activity:** Human, Vehicular & Plant Activity  
**Scope of Monitoring:** Regulatory Requirement  
**Sampling & Analysis Protocol:** IS : 5162  
**Sampling Duration:** 24 Hrs.  
**Parameter Required:** As Per Work Order  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23):2008,RA:2017</td>
<td>72.32</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24):2019</td>
<td>37.74</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P-6):2006,RA:2017</td>
<td>20.87</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2):2001, RA:2017</td>
<td>9.05</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22):2004 RA:2014</td>
<td>BDL (&quot;DL 0.02 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1986, Method No.302</td>
<td>BDL (&quot;DL 1.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

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**Note:** Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268  
E-mail: jaipur@varadanenvironet.com

Scanned with CamScanner
Test Report

Sample Number: VEL/REL/AA/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikeda, Block-Tilda Dist. Raipur-493225 (CG)Talabira Mines

Report No.: VELJA/20212220001/B
Format No.: 7.8 F-01
Party Reference No.: NIL
Report Date: 25/12/2020
Period of Analysis: 22/12/2020-25/12/2020
Receipt Date: 22/12/2020

Sample Description: AMBIENT AIR

General Information
Sampling Location: Rest Shelter 1.5 KM in SE From the Mine
Sample Collected by: VEL Team
Sampling Equipment used: RDS/FPS
Instrument Code: VELJA/RDS/31/FPS/25
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 19/12/2020 To 20/12/2020
Time of Monitoring: 09.40 to 09.40 Hrs.
Ambient Temperature (°C): Min 12 Max 26
Surrounding Activity: Human, Vehicular & Plant Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS :5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (&quot;DL.1.0 ng/m³&quot;)</td>
<td>μg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

---

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Note: Terms & conditions refer on backside of test report.
**Test Report**

Sample Number: VEL/REL/AA/02  
Name & Address of the Party: Ms. Raipur Energen Limited  
Village: Raikheda, Block-Tilda, Raipur - 493225  
(CG) Talabira Mines  
Report No.: VEL/IA/2022222222/A  
Format No.: 7 B F-01  
Party Reference No.: NIL  
Report Date: 25/12/2020  
Period of Analysis: 22/12/2020-25/12/2020  
Receipt Date: 22/12/2020

Sample Description: AMBIENT AIR  

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
</table>
| Sampling Location  | R&R Colony 3.2 KM in NE from the mine  
| Sample Collected by | VEL Team  
| Sampling Equipment used | RDS FPS  
| Instrument Code | VEL/JAI/RDS/32/FPS/26  
| Instrument Calibration Status | Calibrated  
| Latitude | --  
| Longitude | --  
| Meteorological condition during monitoring | Clear Sky  
| Date of Monitoring | 19/12/2020 To 20/12/2020  
| Time of Monitoring | 10.10 to 10.10 Hrs  
| Ambient Temperature (°C) | Min 12 Max 26  
| Surrounding Activity | Human, Venuclar & Plant Activity  
| Scope of Monitoring | Regulatory Requirement  
| Sampling & Analysis Protocol | IS-5182  
| Sampling Duration | 24 Hrs.  
| Parameter Required | As Per Work Order  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006, RA. 2017</td>
<td>71.63</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>32.68</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA.2017</td>
<td>21.78</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>11.51</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (DL:0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (DL:1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed., 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

**End of Report***

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AA/02  
**Name & Address of the Party:** M/s Raipur Energex Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabra Mines  

**Sample Description:** AMBIENT AIR  

**General Information**  
- **Sample Collected by:** VEL Team  
- **Sampling Equipment used:** RDS/FPS  
- **Instrument Code:** VEL/IA/RDS/32/FPS/26  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 19/12/2020 To 20/12/2020  
- **Time of Monitoring:** 10.10 to 10.10 Hrs  
- **Ambient Temperature (°C):** Min 12 Max 26  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS: 5182  
- **Sampling Duration:** 24 Hrs.  
- **Parameter Required:** As Per Work Order  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury [Hg]</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 347</td>
<td>BDL (<em>DL 1.0 ng/m³</em>)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

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**Note:** Terms & conditions refer on backside of test report.

**Ph:** 0141-2983404, 9810355569, 9953147268  
**E-mail:** jaipur@vardanenvironet.com

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**Page No. 1/1**
## Test Report

**Sample Number:** VEL/REL/AA/03  
**Name & Address of the Party:** Ms Raipur Energen Limited  
Village: Raikhetda, Block-Tilda Dist. Raipur -493225  
(CG)Talabra Mines  

**Sample Description:** AMBIENT AIR

**General Information**  
**Sampling Location:** Village - Khinda 3 KM in SE From the mine  
**Sample Collected by:** VEL Team  
**Sampling Equipment used:** RDS/FPS  
**Instrument Code:** VEL/A/2020/33/FPS/27  
**Instrument Calibration Status:** Calibrated  
**Latitude:** --  
**Longitude:** --  
**Meteorological condition during monitoring:** Clear Sky  
**Date of Monitoring:** 19/12/2020 To 20/12/2020  
**Time of Monitoring:** 10.40 to 10.40 Hrs.  
**Ambient Temperature (°C):** Min 12 Max 26  
**Surrounding Activity:** Human, Vehicular & Plant Activity  
**Scope of Monitoring:** Regulatory Requirement  
**Sampling & Analysis Protocol:** IS : 5182  
**Sampling Duration:** 24 Hrs.  
**Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA: 2017</td>
<td>69.69</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM -2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>42.48</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006,RA:2017</td>
<td>19.05</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001,RA:2017</td>
<td>12.75</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA,2014</td>
<td>BDL (*DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

**BDL:** Below Detection Limit  
**DL:** Detection Limit

---

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*Note: Terms & conditions refer on backside of test report.*

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

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

**Sample Number:** VEL/REL/AA/03  
**Name & Address of the Party:** M/s Raipur Energex Limited  
Village: Raikheda, Block-Tilda Dist. Raipur - 493225  
(CG) Talabira Mines

**Sample Description:** AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>Village - Khinda 3 KM In SE From the mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>VEL Team</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>RDS/FPS</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>VEL/AA/RDS/33/FPS/27</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>--</td>
</tr>
<tr>
<td>Latitude</td>
<td>--</td>
</tr>
<tr>
<td>Longitude</td>
<td>--</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>19/12/2020 To 20/12/2020</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10:40 to 10:40 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Mm 12 Max 26</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS : 5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1998, Method No. 317</td>
<td>BDL (~DL1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL - Below Detection Limit  
DL Detection Limit

***End of Report***

(Checked By)

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Note: Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
Test Report

Sample Number : VEL/REL/AA/04
Name & Address of the Party : M/s Rajpur Energen Limited
Village: Raikhetda, Block-Tildia Dist. Rajpurs -438225
(CG)/Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Village - Babu Khinda 3 KM in NE From the mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FGS
Instrument Code : VEL/A4/RDS/34/FGS/28
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 19/12/2020 To 20/12/2020
Time of Monitoring : 11.15 to 11.15 Hrs.
Ambient Temperature (°C) : Min 12 Max 26
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>62.50</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>24.17</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006,RA.2017</td>
<td>19.51</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>8.63</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

www vardan.co.in

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AA/04
Name & Address of the Party: M/s Raipur Energen Limited
Village: Rakcheda, Block-Tilda Dist. Raipur -493225
(CG) Tolabira Mines

Report No.: VEL/A/2012220005/A
Format No.: 7.6 F-01
Party Reference No.: NIL
Report Date: 25/12/2020
Period of Analysis: 22/12/2020-25/12/2020
Receipt Date: 22/12/2020

Sample Description: AMBIENT AIR

General Information
Sampling Location: Village - Babu Khinda 3 KM in NE From the mine
Sample Collected by: VEL Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEL/ARDS34/FPS28
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 19/12/2020 To 20/12/2020
Time of Monitoring: 11.15 to 11.15 Hrs.
Ambient Temperature (°C): Min 12 Max 26
Surrounding Activity: Human, Vehicular & Plant Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS : 5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>72.58</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>37.35</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA.2017</td>
<td>20.65</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>10.28</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5162 (P-22) : 2004 RA.2014</td>
<td>BDL (DL:0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (DL:1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL (DL:1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL-Below Detection Limit DL Detection Limit

***End of Report***

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Note: Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenviro.net.com

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Test Report

Sample Number: VEL/REL/AA/04
Name & Address of the Party: Mrs. Ramprasad, Block F, 2nd Floor, B-2, Triloknagar, Jaipur (Rajasthan) 302020

Sample Description: AMBIENT AIR

General Information:
- Sampling Location: Village - Bahadurpur, 3 km in NE from the mine.
- Sample Collected by: VEL Team
- Sampling Equipment used: Pump
- Instrument Code: VEL/AA/04/04/P/S/02
- Instrument Calibration Status: Calibrated
- Latitude:
- Longitude:
- Meteorological condition during monitoring: Clear Sky
- Date of Monitoring: 25/12/2020 to 26/12/2020
- Time of Monitoring: 11:30 to 11:35 hrs.
- Ambient Temperature (°C): Mean 25, Max 26
- Surrounding Activity: Human, vehicular & plant activity
- Scope of Monitoring:
- Sampling & Analysis Protocol: IS 3115
- Sampling Duration: 5K hrs
- Parameter Required: As per Work Order

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed. 1996, Method No 317</td>
<td>BDL (TJL.5.6) mg/m³</td>
<td>mg/m³</td>
<td>—</td>
</tr>
</tbody>
</table>

BDL Below Detection Limit, DL Detection Limit

"End of Report"

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Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/RELAA/006

Name & Address of the Party: Mis Raipur Energen Limited
Village: Raiheda, Block Tilda Dist. Raipur - 493225 (CG) Talabra Mines

General Information:
- Sampling Location: Near Petrol Pump
- Sample Collected by: VEL Team
- Sampling Equipment used: RDS/FPS
- Instrument Code: VEL/JAIRD3/32/FPS/26
- Instrument Calibration Status: Calibrated
- Latitude: --
- Longitude: --
- Meteorological condition during monitoring: Clear Sky
- Date of Monitoring: 20/12/2020 To 21/12/2020
- Time of Monitoring: 09.40 to 09.40 Hrs.
- Ambient Temperature (°C): Min 11 Max 25
- Surrounding Activity: Human, Vehicular & Plant Activity
- Scope of Monitoring: Regulatory Requirement
- Sampling & Analysis Protocol: IS:5182
- Sampling Duration: 24 Hrs.
- Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA. 2017</td>
<td>69.82</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>35.42</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA.2017</td>
<td>16.33</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>9.45</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

**End of Report**

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Note: Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

Scanned with CamScanner
# Test Report

**Sample Number:** VEL/REL/AA/07  
**Name & Address of the Party:** Ms Rapur Energen Limited  
Village: Raikeda, Block-Tilda Dist. Rapur -493225  
(CG)Talabra Mines

**General Information**  
- **Sample Collected by:** VEL Team  
- **Sampling Location:** In Front Of The Mine Office  
- **Sampling Equipment used:** RD/SFPS  
- **Instrument Code:** VEL/JAI/RDS/03/FPS/27  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 20/12/2020 To 21/12/2020  
- **Time of Monitoring:** 10:12 to 10:12 Hrs.  
- **Ambient Temperature (°C):** Min 11 Max 25  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS :5182  
- **Sampling Duration:** 24 Hrs.  
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-2006,R.A.2017)</td>
<td>69.84</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>32.50</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA.2017</td>
<td>17.69</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA.2017</td>
<td>9.46</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

---

**Ph:** 0141-2983404, 9810355569, 9953147268  
E-mail: jaipur@vardanenvironet.com

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**www.vardan.co.in**

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/08
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG)Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : A1 Down Wind Point of Talabira mine Area
Sample Collected by : VEL Team
Sampling Equipment used : RDS/VOC
Instrument Code : VEL/AIRDS/34/VOC/01
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/12/2020 To 21/12/2020
Time of Monitoring : 11.20 to 11.20 Hrs.
Ambient Temperature (°C) : Min 11 Max 25
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5162
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS:5162 (P-11):2006, RA 2017</td>
<td>BDL (&quot;DL1.0 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5162 (P-12):2004</td>
<td>*BDL(&quot;DL:5.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

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Note: Terms & conditions refer on backside of test report.
### Test Report

**Sample Number:** VEL/RELI/AN/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Rakheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Protocol Used:** IS 9989; IS 9876  
**Instrument Used:** SLM

### General Information
- **Sampling Location:** In Front of mine Office
- **Instrument Code:** VELJAI/SLM/008
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 19/12/2020 To 20/12/2020
- **Time of Monitoring:** 08.00 to 08.00 Hrs.
- **Ambient Temperature (°C):** Min 11 Max 25
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Parameter Required:** As Per Work Order

### Test Result dB (A)

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Day Time</th>
<th>Night Time</th>
</tr>
</thead>
</table>

### Category of Zones

<table>
<thead>
<tr>
<th>Category of Zones</th>
<th>Leq in dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6:00 AM to 10:00 PM.  
2. Night Time is reckoned between 10:00 PM to 6:00 AM.  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

***End of Report***

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**Note:** Terms & conditions refer on backside of test report.
# Test Report

**Sample Number**: VEL/REL/AN/02  
**Name & Address of the Party**: M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG)Telabira Mines  

**Sample Description**: Ambient Noise  
**Scope of Monitoring**: Regulatory Requirement  
**Protocol Used**: IS 9989, IS 9876  
**Instrument Used**: SLM

---

**Report No.**: VEL/N/2012220002/A  
**Format No.**: 7.8 F-01  
**Party Reference No.**: NIL  
**Report Date**: 25/12/2020  
**Receipt Date**: 22/12/2020  
**Sampling Duration**: 24 Hrs.  
**Sample Collected by**: VEL Team  
**Instrument**: Calibrated  
**Calibration Status**:

<table>
<thead>
<tr>
<th>General Information</th>
<th>Near Petrol Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>VEL/JAI/SLM/09</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>VEL/JAI/SLM/09</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>19/12/2020 To 20/12/2020</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>06.00 to 06.00 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Min 11 Max 25</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
</tbody>
</table>

### Test Parameters

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leq</td>
<td></td>
<td>56.51</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category of Zones</th>
<th>Leq in dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM.  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.  
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

---

***End of Report***

---

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**Note**: Terms & conditions refer on backside of test report.

---

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E-mail: jaipur@vardanenvironet.com  

---

Scanned with CamScanner
# Test Report

**Sample Number:** VEL/RELJAN/003  
**Name & Address of the Party:** M/s Raipur Energien Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabra Mines  

**Sample Description:** Ambient Noise  
**Scope of Monitoring:** Regulatory Requirement  
**Protocol Used:** IS 9989, IS 9876  
**Instrument Used:** SLM

## General Information
- **Sampling Location:** Near Weight Bridge  
- **Instrument Code:** VEL/JAI/SLM/10  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 19/12/2020 To 20/12/2020  
- **Time of Monitoring:** 06.00 to 06.00 Hrs.  
- **Ambient Temperature (°C):** Min 12 Max 28  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Parameter Required:** As Per Work Order

## S.No. | Test Parameters | Protocol | Test Result dB (A)  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>54.66</td>
</tr>
</tbody>
</table>

### Category of Zones

<table>
<thead>
<tr>
<th>Category</th>
<th>Leq in dB(A)</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, luidspeaker and bursting of crackers is banned in these zones.  
**Note:** Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

***End of Report***

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**Note:** Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Location:** R&R Colony (Open Well)  
**Sample Description:** GROUND WATER  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 Reaff. 2017</td>
<td>7.56</td>
<td>–</td>
<td>6.5 to 8.5; Permissible Limits: No Relaxation</td>
</tr>
<tr>
<td>2</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (P-16): 1984 Reaff. 2017</td>
<td>268.00</td>
<td>mg/l</td>
<td>500; 2000</td>
</tr>
<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS 3025 (Part 23): 1986, Reaff. 2019</td>
<td>141.90</td>
<td>mg/l</td>
<td>200; 600</td>
</tr>
<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS 3025 (Part 21): 2009, Reaff. 2019</td>
<td>185.40</td>
<td>mg/l</td>
<td>200; 600</td>
</tr>
<tr>
<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS 3025 (Part 34): 1988, Reaff. 2019</td>
<td>3.80</td>
<td>mg/l</td>
<td>45; No Relaxation</td>
</tr>
<tr>
<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS 3025 (Part 32): 1988, Reaff. 2019</td>
<td>61.26</td>
<td>mg/l</td>
<td>250; 1000</td>
</tr>
<tr>
<td>7</td>
<td>Sulphate (as SO4)</td>
<td>IS 3025 (Part 24): 1986, Reaff. 2019</td>
<td>13.18</td>
<td>mg/l</td>
<td>200; 400</td>
</tr>
<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS 3025 (Part 40): 1991 Reaff. 2019</td>
<td>66.05</td>
<td>mg/l</td>
<td>75; 200</td>
</tr>
<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)</td>
<td>5.01</td>
<td>mg/l</td>
<td>30; 100</td>
</tr>
<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4500 FD</td>
<td>0.23</td>
<td>mg/l</td>
<td>1.0; 1.5</td>
</tr>
<tr>
<td>11</td>
<td>Phenolic Compound (as C6H5OH)</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>*BDL (**DL-0.1 mg/l)</td>
<td>mg/l</td>
<td>0.001; 0.002</td>
</tr>
<tr>
<td>12</td>
<td>Total Iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>*BDL (**DL- 0.1mg/l)</td>
<td>mg/l</td>
<td>0.3; No Relaxation</td>
</tr>
<tr>
<td>13</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>*BDL (**DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01; 0.05</td>
</tr>
<tr>
<td>14</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL (**DL-0.0005 mg/l)</td>
<td>mg/l</td>
<td>0.001; No Relaxation</td>
</tr>
<tr>
<td>15</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (**DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01; No Relaxation</td>
</tr>
<tr>
<td>16</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (**DL-0.002 mg/l)</td>
<td>mg/l</td>
<td>0.003; No Relaxation</td>
</tr>
<tr>
<td>17</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>*BDL (**DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05; No Relaxation</td>
</tr>
<tr>
<td>18</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3111B</td>
<td>*BDL (**DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05; 1.5</td>
</tr>
<tr>
<td>19</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (**DL-0.20 mg/l)</td>
<td>mg/l</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Note: Terms & conditions refer on backside of test report.

---

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<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acceptable Limits</td>
</tr>
<tr>
<td>20</td>
<td>Selenium (as Se)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL(*DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Nephelometric Method)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>*BDL(*DL-0.03 mg/l)</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>23</td>
<td>Manganese (as Mn)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2019</td>
<td>*BDL(*DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.1</td>
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<tr>
<td></td>
<td></td>
<td>(EDTA method)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017</td>
<td>*BDL(*DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Method No. 4500B</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS: 3025 (Part 25): 1986 RA 2019</td>
<td>*BDL(*DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit.

***End of Report***

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village. Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) T h a b i r a M i n e s

**Sample Description:** GROUND WATER  
**Location:** RSR Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Acceptable Limits</td>
</tr>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/10 ml</td>
<td>Shall not be Detectable In any 100 ml sample</td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500CN D</td>
<td>*BDL(**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025: 1983 (P-4) RA.. 2017</td>
<td>*BDL(**DL 1.0 Hazen Unit)</td>
<td>Hazen Unit</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-5); RA. 2018</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>6</td>
<td>Taste</td>
<td>IS 3025(P-8); 1984 RA. 2017</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL(**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit.

***End of Report***

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VELWW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG)Talabira Mines  

**Sample Description:** Waste Water  
**Location:** STP Outlet  
**Sample Collected by:** VEL Team  
**Parameter Required:** As Per Work Order  
**Sampling and Analysis Protocol:** IS 3025  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 RA2017</td>
<td>7.62</td>
<td>mg/l</td>
<td>5.5 - 9.0</td>
</tr>
<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17): 1984, RA2017</td>
<td>26.00</td>
<td>mg/l</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-39):1991 RA 2019</td>
<td>0.7</td>
<td>mg/l</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 3025 (Part-44): 1993, RA: 2019</td>
<td>15.60</td>
<td>mg/l</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA: 2017</td>
<td>70.90</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

---

**Report No.:** VELWW/2012220001/A  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 26/12/2020  
**Period of Analysis:** 22/12/2020-26/12/2020  
**Receipt Date:** 22/12/2020  
**Sampling Date:** 21/12/2020  
**Sampling Quantity:** 2 Ltr.  
**Sampling Type:** Grab  
**Packing Status:** Temp. Sealed  

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*Note: Terms & conditions refer on backside of test report.*

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Page No. 1/1
Test Report

Sample Number : VEL/REL/AA/01
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG)Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Rest Shelter 1.5 KM in SE From the Mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/07/FPS/09
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/01/2021 To 21/01/2021
Time of Monitoring : 10.00 to 10.00 Hrs.
Ambient Temperature (°C) : Min 10 Max 22
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>72.18</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>39.36</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>20.46</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.27</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (*DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>–</td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit,**DL-Detection Limit

**End of Report**

DINESH PALSANIYA (Checked By)
DV TECHNICAL MANAGER

RAJ KUMAR YADAV (Authorized Signatory)

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AA/01  
**Name & Address of the Party:** M/s Raipur Enegre Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines  
**Sample Description:** AMBIENT AIR  

## General Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
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<tbody>
<tr>
<td>Sampling Location</td>
<td>Rest Shelter 1.5 KM in SE From the Mine</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>VEL Team</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>VEL/JAI/RDS/07/FPS/09</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>VEL/JAI/RDS/07/FPS/09</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Latitude</td>
<td>--</td>
</tr>
<tr>
<td>Longitude</td>
<td>--</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>20/01/2021 To 21/01/2021</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10.00 to 10.00 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Min 10 Max 22</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS : 5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
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</table>

## Test Method

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (DL 1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL - Below Detection Limit, **DL - Detection Limit

***End of Report***

**DINESH PALSANIYA**  
(Checked By)  

**DY TECHNICAL MANAGER**

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*Note: Terms & conditions refer on backside of test report.*
**Test Report**

Sample Number: VEL/REL/AA/02  
Name & Address of the Party: M/s Raipur Energen Limited  
   Village: Raikheda, Block-Tilda Dist. Raipur - 493225  
   (CG) Talabira Mines

Report No.: VELJ/2101270010/B  
Format No.: 7.8 F-01  
Party Reference No.: NIL  
Report Date: 30/01/2021  
Period of Analysis: 27/01/2021-30/01/2021  
Receipt Date: 27/01/2021

Sample Description: AMBIENT AIR

**General Information**
- Sampling Location: R&R Colony 3.2 KM in NE From the mine
- Sample Collected by: VEL Team
- Sampling Equipment used: RDS/FPS
- Instrument Code: VELJ/A/RDS/35/FPS/25
- Instrument Calibration Status: Calibrated
- Latitude: --
- Longitude: --
- Meteorological condition during monitoring: Clear Sky
- Date of Monitoring: 20/01/2021 To 21/01/2021
- Time of Monitoring: 11.00 to 11.00 Hrs.
- Ambient Temperature (°C): Min 10 Max 22
- Surrounding Activity: Human, Vehicular & Plant Activity
- Scope of Monitoring: Regulatory Requirement
- Sampling & Analysis Protocol: IS : 5182
- Sampling Duration: 24 Hrs.
- Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.317</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit, **DL-Detection Limit

***End of Report***

DINESH PALSANIYA  
(Checked By)  
DY. TECHNICAL MANAGER

RAJ KUMAR YADAV  
(Authorized Signatory)  
G M LAB OPERATIONS

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number**: VEL/REL/AA/02  
**Name & Address of the Party**: M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist, Raipur -493225  
(CG) Talabira Mines

### General Information
- **Sampling Location**: R&R Colony 3.2 KM in NE From the mine
- **Sample Collected by**: VEL Team
- **Sampling Equipment used**: RDS/FPS
- **Instrument Code**: VEL/JA/RDS/35/FPS/25
- **Instrument Calibration Status**: Calibrated
- **Latitude**: --
- **Longitude**: --
- **Meteorological condition during monitoring**: Clear Sky
- **Date of Monitoring**: 20/01/2021 To 21/01/2021
- **Time of Monitoring**: 11.00 to 11.00 Hrs.
- **Ambient Temperature (°C)**: Min 10 Max 22
- **Surrounding Activity**: Human, Vehicular & Plant Activity
- **Scope of Monitoring**: Regulatory Requirement
- **Sampling & Analysis Protocol**: IS : 5182
- **Sampling Duration**: 24 Hrs.
- **Parameter Required**: As Per Work Order

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<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>73.65</td>
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</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>34.82</td>
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<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.88</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>10.48</td>
<td>µg/m³</td>
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<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (DL1.0)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit, **DL-Detection Limit

---

***End of Report***

**Page No. 1/1**

**Note**: Terms & conditions refer on backside of test report.
### Test Report

**Sample Number**: VEL/REL/AA/03  
**Name & Address of the Party**: M/s Raipur Energen Limited  
**Village**: Raikheda, Block-Tilda Dist. Raipur - 493225  
**CG)Talabira Mines**  

**Sample Description**: AMBIENT AIR

**General Information**
- **Sampling Location**: Village - Khinda 3 KM In SE From the mine  
- **Sample Collected by**: VEL Team  
- **Sampling Equipment used**: RDS/FPS  
- **Instrument Code**: VEL/JAI/RDS/35/FPS/26  
- **Instrument Calibration Status**: Calibrated  
- **Latitude**: **Longitude**:  
- **Meteorological condition during monitoring**: Clear Sky  
- **Date of Monitoring**: 20/01/2021 To 21/01/2021  
- **Time of Monitoring**: 12.00 to 12.00 Hrs.  
- **Ambient Temperature (°C)**: Min 10 Max 22  
- **Surrounding Activity**: Human, Vehicular & Plant Activity  
- **Scope of Monitoring**: Regulatory Requirement  
- **Sampling & Analysis Protocol**: IS : 5182  
- **Sampling Duration**: 24 Hrs.  
- **Parameter Required**: As Per Work Order

<table>
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<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM - 10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>69.46</td>
<td>µg/m³</td>
<td>100</td>
</tr>
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<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>43.13</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.06</td>
<td>µg/m³</td>
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<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>11.80</td>
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<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P- 22) : 2004 RA.2014</td>
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<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td></td>
</tr>
</tbody>
</table>

*BDL - Below Detection Limit, **DL-Detection Limit

---

**Checked By**: DINESH PALSANIYA  
**(Checked By)**: DY TECHNICAL MANAGER  
**(Authorized Signatory)**: G M LAB OPERATION

**www.vardan.co.in**  
**Note**: Terms & conditions refer on backside of test report.

---

**Ph**: 0141-2983404, 9810355569, 9953147268  
**E-mail**: Jainur@vardandenvironet.com

---

**RAJ KUMAR YADAV**

**Page No. 1/1**
Test Report

Sample Number : VEL/REL/AA/03
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Village - Khinda 3 KM In SE From the mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/36/FPS/26
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/01/2021 To 21/01/2021
Time of Monitoring : 12.00 to 12.00 Hrs.
Ambient Temperature (°C) : Min 10 Max 22
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
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<th>S.No</th>
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<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (*DL 1.0 ng/m³)</td>
<td>μg/m³</td>
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</tr>
</tbody>
</table>

*BDL: Below Detection Limit, **DL: Detection Limit

***End of Report***

DINESH PALSANIYA
(Checked By)

RAJ KUMAR YADAV
Authorized Signatory

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Note: Terms & conditions refer on backside of test report.
# Test Report

Sample Number: VEL/REL/AA/04  
Name & Address of the Party: M/s Raipur Energen Limited  
Village: Raikhedla, Block-Tilda Dist. Raipur - 493225 (CG) Talabra Mines  

Sample Description: AMBIENT AIR  

---

### General Information

- **Sampling Location:** Village - Babu Khinda 3 KM in NE From the mine  
- **Sample Collected by:** VEL Team  
- **Sampling Equipment used:** RDS/FPS  
- **Instrument Code:** VEL/IA/RDS/37/FPS/27  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 20/01/2021 To 21/01/2021  
- **Time of Monitoring:** 13.30 to 13.30 Hrs.  
- **Ambient Temperature (°C):** Min 10 Max 22  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS: 5182  
- **Sampling Duration:** 24 Hrs.  
- **Parameter Required:** As Per Work Order  

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<table>
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<tr>
<th>S.No.</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA, 2017</td>
<td>64.96</td>
<td>µg/m³</td>
<td>100</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>26.33</td>
<td>µg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-5)-2006,RA,2017</td>
<td>19.27</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA, 2017</td>
<td>9.37</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

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**DINESH PALSANIYA**  
(Checked By)  
**GM, TECHNICAL MANAGER**

---

**RAJ KUMAR YADAV**  
(Authorized Signature)

---

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/AA/04  
**Name & Address of the Party:** M/s Raipur Energen Limited  
**Village:** Raikhesa, Block-Tilda Dist. Raipur - 493225  
**CG/Talabira Mines**  

**Sample Description:** AMBIENT AIR

### General Information
- **Sampling Location:** Village - Babu Khinda 3 KM in NE From the mine
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/IA/RDS/07/FPS/09
- **Instrument Calibration Status:** Calibrated
- **Latitude:** --
- **Longitude:** --
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 21/01/2021 To 22/01/2021
- **Time of Monitoring:** 10.30 to 10.30 Hrs.
- **Ambient Temperature (°C):** Min 9 Max 20
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
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<tr>
<th>S.No.</th>
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<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA. 2017</td>
<td>69.98</td>
<td>µg/m³</td>
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<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>40.97</td>
<td>µg/m³</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2016</td>
<td>21.13</td>
<td>µg/m³</td>
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<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2004, RA. 2017</td>
<td>10.21</td>
<td>µg/m³</td>
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<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (DL 0.02 µg/m³)</td>
<td></td>
<td>1.0</td>
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<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed, 1988, Method No.302</td>
<td>BDL (DL 1.0 ng/m³)</td>
<td></td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit, **DL-Detection Limit

**End of Report**

**DINESH PALSANIYA**  
(Checked By)  
**HE TECHNICAL MANAGER**

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**Note:** Terms & conditions refer on backside of test report.

**Ph:** 0141-2983404, 9810355569, 9953147268  
E-mail: jainur@vardanenviro.com
# Test Report

**Sample Number:** VEL/REL/AA/04  
**Name & Address of the Party:** M/s Rajpur Energen Limited  
  Village: Raikheda, Block-Tilda Dist. Raipur - 493225  
  (CG) Talabira Mines

**Sample Description:** AMBIENT AIR

**General Information**
- **Sampling Location:** Village - Babu Khinda 3 KM in NE from the mine
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/AI/RDS/07/FPS/09
- **Instrument Calibration Status:** Calibrated
- **Latitude:**
- **Longitude:**
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 21/01/2021 To 22/01/2021
- **Time of Monitoring:** 10.30 to 10.30 Hrs.
- **Ambient Temperature (°C):** Min 9 Max 20
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (&quot;DL1.0 ng/m³&quot;)</td>
<td>µg/m³</td>
<td><strong>End of Report</strong></td>
</tr>
</tbody>
</table>

*BDL- Below Detection Limit, **DL-Detection Limit*

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**DINESH PALSANIYA**  
**GM LAB OPERATION**

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**Note:** Terms & conditions refer on backside of test report.
**Test Report**

**Sample Number:** VEL/REL/AA/06
**Name & Address of the Party:** M/s Raipur Energen Limited
   Village: Raikhed, Block-Tilda Dist. Raipur -493225
   (CG) Talabra Mines

**Sample Description:** AMBIENT AIR

**General Information**
- **Sampling Location:** Near Petrol Pump
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/IA/RDS/35/FPS/25
- **Instrument Calibration Status:** Calibrated
- **Latitude:** --
- **Longitude:** --
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 21/01/2021 To 22/01/2021
- **Time of Monitoring:** 11.00 to 11.00 Hrs.
- **Ambient Temperature (°C):** Min 9 Max 20
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
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<tr>
<th>S.No.</th>
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<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
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<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>37.25</td>
<td>μg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>16.50</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.40</td>
<td>μg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

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**End of Report**

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**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/07
Name & Address of the Party : M/s Raipur Energen Limited
Village- Raikheda, Block-Tilda Dist. Raipur -493225
(CG)Talabra Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : In Front of The Mine Office
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/36/FPS/26
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --

Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 21/01/2021 To 22/01/2021
Time of Monitoring : 12.00 to 12.00 Hrs.
Ambient Temperature (°C) : Min 9 Max 20
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
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<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>68.88</td>
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<tr>
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<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>31.31</td>
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<td>60</td>
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<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.61</td>
<td>µg/m³</td>
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<tr>
<td>4</td>
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<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.78</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

DINESH PALSANIYA
(Checked By)
DY. TECHNICAL MANAGER

RAJ KUMAR YADAV
(Authorised Signatory)
C M LAB OPERATIONS

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number**: VEL/REL/AA/08  
**Name & Address of the Party**: M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines  

**Report No.**: VEL/A/2101270016/B  
**Format No.**: 7.8 F-01  
**Party Reference No.**: NIL  
**Report Date**: 30/01/2021  
**Period of Analysis**: 27/01/2021-30/01/2021  
**Receipt Date**: 27/01/2021  

**Sample Description**: AMBIENT AIR  

**General Information**  
- **Location**: A1 Down Wind Point of Talabira mine Area  
- **Sample Collected by**: VEL Team  
- **Sampling Equipment used**: RDS/VOC  
- **Instrument Code**: VEL/JAI/RDS/37/VOC/01  
- **Instrument Calibration Status**: Calibrated  
- **Latitude**:  
- **Longitude**:  
- **Meteorological condition during monitoring**: Clear Sky  
- **Date of Monitoring**: 21/01/2021 To 22/01/2021  
- **Time of Monitoring**: 13.00 to 13.00 Hrs.  
- **Ambient Temperature (°C)**: Min 9 Max 20  
- **Surrounding Activity**: Human, Vehicular & Plant Activity  
- **Scope of Monitoring**: Regulatory Requirement  
- **Sampling & Analysis Protocol**: IS : 5182  
- **Sampling Duration**: 24 Hrs.  
- **Parameter Required**: As Per Work Order

<table>
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<tr>
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<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS: 5182 (P-11):2006, RA 2017</td>
<td>&quot;BDL&quot; (<strong>DL-5.0 ng/m³</strong>)</td>
<td>μg/m³</td>
<td><strong>End of Report</strong></td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5182 (P-12):2004</td>
<td>&quot;BDL&quot; (<strong>DL-5.0 ng/m³</strong>)</td>
<td>ng/m³</td>
<td><strong>End of Report</strong></td>
</tr>
</tbody>
</table>

*BDL* - Below Detection Limit, **DL** - Detection Limit

---

**DINESH PALSANIYA**  
(Checked By)  
**DY TECHNICAL MANAGER**

**RAJ KUMAR YADAV**  
(Authorized Signatory)  
C.M. LAB OPERATION

---

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Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AN/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG)Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: In Front of mine Office
Instrument Code: VEL/JAI/SLM/06
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 20/01/2021 To 21/01/2021
Time of Monitoring: 06.00 to 06.00 Hrs.
Ambient Temperature (°C): Min 10 Max 20
Surrounding Activity: Human, Vehicular & Plant Activity
Parameter Required: As Per Work Order

<table>
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<td></td>
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<td>49.52</td>
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Category of Zones

<table>
<thead>
<tr>
<th></th>
<th>Leq in dBA</th>
</tr>
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<tbody>
<tr>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.
4. Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

***End of Report***

DINESH PAL SANYA
(Checked By)

DY TECHNICAL MANAGER

RAJ KUMAR YADAV
(Authorized Signatory)

CM LAB OPERATION

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AN/02
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG)/Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: Near Petrol Pump
Instrument Code: VEL/JAI/SLM/08
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 20/01/2021 To 21/01/2021
Time of Monitoring: 06.00 to 06.00 Hrs.
Ambient Temperature (°C): Min 10 Max 20
Surrounding Activity: Human, Vehicular & Plant Activity
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>IS 9989 - 1981</td>
<td>Day Time</td>
</tr>
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Category of Zones

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>Day</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
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<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

***End of Report***

Signed:

RAJ KUMAR YADAV
Authorized Signatory
CM Lab Operation

DINESHPALSANIYA
(Checked By)
By Technical Manager

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/AN/03  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur - 493225  
(CC) Talabira Mines

**Sample Description:** Ambient Noise  
**Scope of Monitoring:** Regulatory Requirement  
**Protocol Used:** IS 9989: IS 9879  
**Instrument Used:** SLM

### General Information

<table>
<thead>
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<th>Parameter</th>
<th>Details</th>
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<td>Sampling Location</td>
<td>Near Weight Bridge</td>
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<tr>
<td>Instrument Code</td>
<td>VEL/JAL/SLM/09</td>
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<tr>
<td>Meteorological condition</td>
<td>Clear Sky</td>
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<td>Date of Monitoring</td>
<td>20/01/2021 To 21/01/2021</td>
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<tr>
<td>Time of Monitoring</td>
<td>06.00 to 06.00 Hrs.</td>
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<td>Ambient Temperature (°C)</td>
<td>Min 10 Max 20</td>
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<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
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<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
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### Test Parameters

<table>
<thead>
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### Category of Zones

<table>
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<td>Day: 75, Night: 70</td>
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<tr>
<td>Commercial</td>
<td>Day: 65, Night: 55</td>
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<tr>
<td>Residential</td>
<td>Day: 55, Night: 45</td>
</tr>
<tr>
<td>Silence</td>
<td>Day: 50, Night: 40</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

---

**End of Report**

---

**Dinesh Palwaniya**  
(Checked By)  
**AM TECHNICAL MANAGER**

**Raj Kumar Yadav**  
(Authorized Signatory)  
**CM LAB OPERATIONS**
## Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG)Talabira Mines  

**Sample Description:** GROUND WATER  
**Location:** R&R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acceptable Limits</td>
<td>Permissible Limits</td>
<td></td>
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<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 Reaff. 2017</td>
<td>7.62</td>
<td>--</td>
<td>6.5 to 8.5</td>
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<tr>
<td>2</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (P-16): 1984 Reaff 2017</td>
<td>283.00</td>
<td>mg/l</td>
<td>500</td>
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<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS: 3025 (Part 23): 1986, Reaff. 2019</td>
<td>135.80</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS: 3025 (Part 21): 2009, Reaff. 2019</td>
<td>196.00</td>
<td>mg/l</td>
<td>200</td>
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<tr>
<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS: 3025 (Part 34): 1988, Reaff. 2019</td>
<td>3.93</td>
<td>mg/l</td>
<td>45</td>
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<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS: 3025 (Part 32): 1988, Reaff. 2019</td>
<td>63.17</td>
<td>mg/l</td>
<td>250</td>
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<tr>
<td>7</td>
<td>Sulphate (as SO4)</td>
<td>IS: 3025 (Part 24): 1988, Reaff. 1989 Turbidity Method</td>
<td>13.68</td>
<td>mg/l</td>
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<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS: 3025 (Part 40): 1991 Reaff. 1999</td>
<td>69.13</td>
<td>mg/l</td>
<td>75</td>
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<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS: 3025 (Part 48): 1994, Reaff. 2009 (EDTA method)</td>
<td>5.72</td>
<td>mg/l</td>
<td>30</td>
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<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4500 FD</td>
<td>0.22</td>
<td>mg/l</td>
<td>1.0</td>
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<tr>
<td>11</td>
<td>Phenolic Compound (as C6H5OH)</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>BDL (&quot;DL:0.1 mg/l)</td>
<td>mg/l</td>
<td>0.001</td>
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<tr>
<td>12</td>
<td>Total Iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>BDL (&quot;DL- 0.1mg/l)</td>
<td>mg/l</td>
<td>0.3</td>
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<tr>
<td>13</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>BDL (&quot;DL- 0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
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<tr>
<td>14</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>BDL (&quot;DL-0.0005 mg/l)</td>
<td>mg/l</td>
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</tr>
<tr>
<td>15</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (&quot;DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
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<tr>
<td>16</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (&quot;DL-0.002 mg/l)</td>
<td>mg/l</td>
<td>0.003</td>
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<tr>
<td>17</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>BDL (&quot;DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
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<tr>
<td>18</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3111B</td>
<td>BDL (&quot;DL-0.02 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>19</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>BDL (&quot;DL-0.20 mg/l)</td>
<td>mg/l</td>
<td>5.0</td>
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</table>

**Note:** Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/GW/01  
**Report No.:** VEL/W/2101270001/A

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
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</thead>
<tbody>
<tr>
<td>20</td>
<td>Selenium (as Se)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL(**DL-0.005 mg/l)</td>
<td>mg/l</td>
<td>0.01</td>
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<tr>
<td>22</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>*BDL(**DL-0.03 mg/l)</td>
<td>mg/l</td>
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<tr>
<td>23</td>
<td>Manganese (as Mn)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)</td>
<td>*BDL(**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.1</td>
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<tr>
<td>24</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017 Method No. 4500B</td>
<td>*BDL(**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.5</td>
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<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS: 3025 (Part 26): 1986 RA 2019</td>
<td>*BDL(**DL-0.2 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit.

---

**End of Report***

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**DINESH PALASANIYA**
(Checked By)

**DY TECHNICAL MANAGER**

---

(R YADAV)
(Approved By)

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist, Raipur 493225  
(CG) Talabira Mines  
**Report No.:** VEL/W/2101270001/B  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 30/01/2021  
**Period of Analysis:** 27/01/2021-30/01/2021  
**Receipt Date:** 27/01/2021  
**Sampling Date:** 22/01/2021  
**Sampling Quantity:** 2 Ltr.  
**Sampling Type:** Grab  
**Location:** R&R Colony (Open Well)  
**Preservation:** Suitable Preservation  
**Sample Collected by:** VEL Team  
**Sample Description:** GROUND WATER  
**Protocol:** IS 10500-2012

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>Acceptable Limits</th>
<th>Permissible Limits</th>
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<tbody>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/100 ml</td>
<td>Shall not be Detectable in any 100 ml sample</td>
<td>NA</td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500CN D</td>
<td>*BDL(**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.05</td>
<td>No Relaxation</td>
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<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025: 1983 (P-4) RA.. 2017</td>
<td>*BDL(**DL 1.0 Hazen)</td>
<td>Hazen Unit</td>
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<td>15</td>
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<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-5): RA. 2018</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
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<tr>
<td>6</td>
<td>Taste</td>
<td>IS 3025(P-8):1984 RA. 2017</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
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<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL(**DL-0.05 mg/l)</td>
<td>mg/l</td>
<td>0.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit.

---

**DINESH PALSANIYA**  
(Checked By)  
**DY TECHNICAL MANAGER**

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**www.vardan.co.in**  
**Note:** Terms & conditions refer on backside of test report.
# Test Report

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>VEL/WW/01</th>
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<tbody>
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<td>Name &amp; Address of the Party</td>
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<td>Village: Raikheda, Block-Tilda Dist. Raipur -493225</td>
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<td>(CG) Talabira Mines</td>
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<td>Report No.</td>
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<td>7.8 F-01</td>
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<tr>
<td>Period of Analysis</td>
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</tr>
<tr>
<td>Receipt Date</td>
<td>27/01/2021</td>
</tr>
<tr>
<td>Sampling Date</td>
<td>22/01/2021</td>
</tr>
<tr>
<td>Sampling Quantity</td>
<td>2 Ltr</td>
</tr>
<tr>
<td>Sampling Type</td>
<td>Grab</td>
</tr>
<tr>
<td>Packing Status</td>
<td>Temp. Sealed</td>
</tr>
<tr>
<td>Sample Description</td>
<td>Waste Water</td>
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<tr>
<td>Location</td>
<td>STP Outlet</td>
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<tr>
<td>Sample Collected by</td>
<td>VEL Team</td>
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<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
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<tr>
<td>Sampling and Analysis Protocol</td>
<td>IS 3025</td>
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<tr>
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<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
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<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 RA2017</td>
<td>7.51</td>
<td>-</td>
<td>5.5 - 9.0</td>
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<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17): 1984, RA2017</td>
<td>22.9</td>
<td>mg/l</td>
<td>100.0</td>
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<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-39):1991 RA 2019</td>
<td>0.5</td>
<td>mg/l</td>
<td>10.0</td>
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<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 3025 (Part-44): 1993, RA: 2019</td>
<td>13.5</td>
<td>mg/l</td>
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<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA: 2017</td>
<td>60.72</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

---

**End of Report**

---

DINESH PALSANIYA  
(Checked By)

BY TECHNICAL MANAGER  

RAJ KUMAR YADAV  
(Authorized Signatory)

G M LAB OPERATION

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AA/01  
**Name & Address of the Party:** M/s Raipur Energex Limited  
Village Raikeda, Block-Tilda Dist. Raipur -483225  
(CG) Talabira Mines

**Sample Description:** AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td></td>
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<tr>
<td>Sample Collected by</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampling Equipment used</td>
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<td>Instrument Code</td>
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<tr>
<td>Instrument Calibration Status</td>
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</tr>
<tr>
<td>Latitude</td>
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<td></td>
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</tr>
<tr>
<td>Longitude</td>
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<tr>
<td>Date of Monitoring</td>
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<tr>
<td>Time of Monitoring</td>
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<td></td>
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<tr>
<td>Ambient Temperature (°C)</td>
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<td></td>
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</tr>
<tr>
<td>Surrounding Activity</td>
<td></td>
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<tr>
<td>Scope of Monitoring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sampling Duration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter Required</td>
<td></td>
<td></td>
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</tbody>
</table>

- Rest Shelter 1.5 KM in SE From the Mine  
- VEL Team  
- RDS/FPS  
- VELJARDS/22/FPS/22  
- Calibrated  
-  
- Clear Sky  
- 20/02/2021 To 21/02/2021  
- 11.00 to 11.00 Hrs.  
- Min 10 Max 22  
- Human, Vehicular & Plant Activity  
- Regulatory Requirement  
- IS : 5182  
- 24 Hrs.  
- As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results (µg/m³)</th>
<th>Units</th>
<th>Limit as per CPCB (µg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA. 2017</td>
<td>73.19</td>
<td>µg/m³</td>
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</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
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<td>38.27</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 8)-2006 RA.2017</td>
<td>21.62</td>
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<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.17</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (&quot;DL 0.02 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (&quot;DL1.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>—</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

---

**DINESH PALSANIYA**  
(Checked By)  
**RAJ KUMAR YADAV**  
(Reviewed & Signed)

---

**www.vardan.co.in**  
**Note:** Terms & conditions refer on backside of test report.

---

**Ph:** 0141-2983404, 9810355569, 9953147268 **E-mail:** jaipur@vardanenvironet.com
Test Report

Sample Number : VEL/REL/AA/01
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG) Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location
Sample Collected by
Sampling Equipment used
Instrument Code
Instrument Calibration Status
Latitude
Longitude
Meteorological condition during monitoring
Date of Monitoring
Time of Monitoring
Ambient Temperature (°C)
Surrounding Activity
Scope of Monitoring
Sampling & Analysis Protocol
Sampling Duration
Parameter Required

Report No. : VEL/A/21022500007/B
Format No. : 7.8 F-01
Party Reference No : NIL
Report Date : 27/02/2021
Period of Analysis : 25/02/2021-27/02/2021
Receipt Date : 25/02/2021

Rest Shelter 1.5 KM in SE From the Mine
VEL Team
RDS/FPS
VEL/JAI/RDS/22/FPS/22
Calibrated
--
--
Clear Sky
20/02/2021 To 21/02/2021
11.00 to 11.00 Hrs.
Min 10 Max 22
Human, Vehicular & Plant Activity
Regulatory Requirement
IS :5182
24 Hrs.
As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed, 1988, Method No. 317</td>
<td>BDL (*DL 1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

**End of Report**

DINESH PALSAWY
TECHNICAL MANAGER

RAJ KUMAR YADAV
(Authorised Signatory)
GM LAB OPERATION

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/AA/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG)Talabira Mines  

**Sample Description:** AMBITENT AIR  

### General Information
- **Sampling Location:** R&R Colony 3.2 KM in NE From the mine  
- **Sample Collected by:** VEL Team  
- **Sampling Equipment used:** RDS/FPS  
- **Instrument Code:** VELFA/23/FPS/23  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 20/02/2021 To 21/02/2021  
- **Time of Monitoring:** 12.00 to 12.00 Hrs.  
- **Ambient Temperature (°C):** Min 10 Max 22  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS :5182  
- **Sampling Duration:** 24 Hrs.  
- **Parameter Required:** As Per Work Order  

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>75.83</td>
<td>µg/m³</td>
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<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>35.44</td>
<td>µg/m³</td>
<td>60</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.00</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>10.08</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (&quot;DL: 0.02 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (&quot;DL:1.0 ng/m³&quot;)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.857:1988</td>
<td>BDL (DL:1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

---

**DINESH PALSANIYA**  
**Checked By**  
**TECHNICAL MANAGER**

---

**RAJ KUMAR YADAV**  
(Authorized Signatory)

---

**G M LAB OPERATION**

---

**www.vardan.co.in**

**Note:** Terms & conditions refer on backside of test report.

---

**Ph:** 0141-2983404, 9810355569, 9953147268  
**E-mail:** jaipur@vardanenvironet.com
**Test Report**

Sample Number : VEL/REL/AA/02  
Name & Address of the Party : Mrs Rajpur Energy Limited  
Village: Raikheda, Block-Tilda Dist. Raipur-493225  
(CG)Talsibra Mines

Report No. : VEL/A/2102250006/B  
Format No. : 7.8 F-01  
Party Reference No. : NIL  
Report Date : 27/02/2021  
Period of Analysis : 25/02/2021-27/02/2021  
Receipt Date : 25/02/2021

Sample Description : AMBIENT AIR

General Information  
Sampling Location : R&R Colony 3.2 KM in NE From the mine  
Sample Collected by : VEL Team  
Sampling Equipment used : RDS/FPS  
Instrument Code : VEL/IA/RDS/23/FPS/23  
Instrument Calibration Status : Calibrated  
Latitude :  
Longitude :  
Meteorological condition during monitoring : Clear Sky  
Date of Monitoring : 20/02/2021 To 21/02/2021  
Time of Monitoring : 12.00 to 12.00 Hrs.  
Ambient Temperature (°C) : Min 10 Max 22  
Surrounding Activity : Human, Vehicular & Plant Activity  
Scope of Monitoring : Regulatory Requirement  
Sampling & Analysis Protocol : IS :5182  
Sampling Duration : 24 Hrs.  
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (&quot;DL 1.0 ng/m³&quot;)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

Dinesh Palsaniya  
(Checked By)  
By Technical Manager

Raj Kumar Yadav  
(Authorized Signatory)

Page No. 1/1

Note: Terms & conditions refer on backside of test report.

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
## Test Report

**Sample Number:** VEL/REL/AA/03  
**Name & Address of the Party:** Mis Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabra Mines

**Report No.:** VEL/A/21022250009/A  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 27/02/2021  
**Period of Analysis:** 25/02/2021-27/02/2021  
**Receipt Date:** 25/02/2021

**Sample Description:** AMBIENT AIR

**General Information**  
**Sampling Location:** Village - Khinda 3 KM in SE From the mine  
**Sample Collected by:** VEL Team  
**Sampling Equipment used:** RDS/FPS  
**Instrument Code:** VEL/A/CR/24/FPS/24  
**Instrument Calibration Status:** Calibrated  
**Latitude:** --  
**Longitude:** --  
**Meteorological condition during monitoring:** Clear Sky  
**Date of Monitoring:** 20/02/2021 To 21/02/2021  
**Time of Monitoring:** 12:30 to 12:30 Hrs.  
**Ambient Temperature (°C):** Min 10 Max 22  
**Surrounding Activity:** Human, Vehicular & Plant Activity  
**Scope of Monitoring:** Regulatory Requirement  
**Sampling & Analysis Protocol:** IS 5182  
**Sampling Duration:** 24 Hrs.  
**Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM-10)</td>
<td>IS:5182 (P-23)-2006, RA. 2017</td>
<td>68.88</td>
<td>µg/m³</td>
<td>100</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM-2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>44.30</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P-6)-2005, RA. 2017</td>
<td>20.10</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>11.59</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22): 2004 RA. 2014</td>
<td>BDL (*DL 0.02 µg/m³)</td>
<td>BDL (*DL 0.02 µg/m³)</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (*DL 1.0 ng/m³)</td>
<td>BDL (*DL 1.0 ng/m³)</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL-Below Detection Limit  
DL Detection Limit

---

**DINESH PALSANIYA**  
(Checked By)

**RAJ KUMAR YADAV**  
(Authorized Signatory)

**G M LAB OPERATION**

www.vardan.co.in

**Note:** Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
Test Report

Sample Number : VEL/REL/AA/03
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CG)Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Village - Khinda 3 KM in SE From the mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/24/FPS/24
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/02/2021 To 21/02/2021
Time of Monitoring : 12.30 to 12.30 Hrs.
Ambient Temperature (°C) : Min 10 Max 22
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (&quot;DL1.0 ng/m³&quot;)</td>
<td>μg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL-Below Detection Limit DL Detection Limit

DINESH PALSANIYA
(Checked By)

RAJ KUMAR YADAV
(Authorised Signatory)

www.vardan.co.in

**End of Report**

Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number**: VEL/REL/AA/04  
**Name & Address of the Party**: M/s Raiipur Energies Limited  
Village: Raikhet, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Sample Description**: AMBITABIR AIR

**General Information**
- **Sample Collected by**: VEL Team
- **Sampling Location**: Village Babu Khinda 3 KM in NE From the mine
- **Sampling Equipment used**: RDS/FPS
- **Instrument Code**: VELJAI/RDS/25/FPS/25
- **Instrument Calibration Status**: Calibrated
- **Latitude**: --
- **Longitude**: --
- **Meteorological condition during monitoring**: Clear Sky
- **Date of Monitoring**: 20/02/2021 To 21/02/2021
- **Time of Monitoring**: 13.30 to 13.30 Hrs.
- **Ambient Temperature (°C)**: Min 10 Max 22
- **Surrounding Activity**: Human, Vehicular & Plant Activity
- **Scope of Monitoring**: Regulatory Requirement
- **Sampling & Analysis Protocol**: IS : 5182
- **Sampling Duration**: 24 Hrs.
- **Parameter Required**: As Per Work Order

<table>
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<tr>
<th>S.No.</th>
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<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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<tr>
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<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>86.75</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>26.84</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.71</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.97</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

---

**DINESH PALSANIYA**  
Checked by

*Authorized Signatory*

**RAJ KUMAR YADAV**

**DY TECHNICAL MANAGER**

www.vardan.co.in  
**Note**: Terms & conditions refer on backside of test report.
**Test Report**

Sample Number: VEL/REL/AA/05
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -495225 (CG) Talabra Mines

Sample Description: AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>AMBIENT AIR</th>
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</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>Village Babu Khinda 3 KM in NE From the mine</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>VEL Team</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>RDS/FPS</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>VEL/JAI/RDS/22/FPS/22</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Latitude</td>
<td>--</td>
</tr>
<tr>
<td>Longitude</td>
<td>--</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>21/02/2021 To 22/02/2021</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10:30 to 10:30 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Min 11 Max 24</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS : 5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
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</tbody>
</table>

<table>
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<tr>
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<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006,RA. 2017</td>
<td>70.50</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>40.76</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS:5182 (P-6)-2006 RA.2017</td>
<td>22.08</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>10.06</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>BDL (*DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.302</td>
<td>BDL (*DL1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988,Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL-Below Detection Limit DL Detection Limit

End of Report

**DINESH PALSANIYA**

**GM LAB OPERATION**

**RAJ KUMAR YADAV**

(Authorized Signatory)

**Note:** Terms & conditions refer on backside of test report.
**Test Report**

**Sample Number:** VEL/REL/AA/05

**Name & Address of the Party:**
M/s Raipur Enrgen Limited
Village: Raikeda, Block-Tilda Dist. Raipur -493225
(CG) Talabra Mines

**Sample Description:** AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>Village Babu Khinda 3 KM in NE From the mine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>VEL Team</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>RDS/FPS</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>VEL/JAI/RDS/22/FPS/22</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>--</td>
</tr>
<tr>
<td>Latitude</td>
<td>--</td>
</tr>
<tr>
<td>Longitude</td>
<td>--</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>21/02/2021 To 22/02/2021</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10.30 to 10.30 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Min 11 Max 24</td>
</tr>
<tr>
<td>Surounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS :5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs.</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.317</td>
<td>BDL (DL1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL-Below Detection Limit DL-Detection Limit

***End of Report***

DINESH PALSANIYA
(Checked By)

BY TECHNICAL MANAGER

RAJ KUMAR YADAV
Authorized Signature

www.vardan.co.in

Page No. 1/1

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/06
Name & Address of the Party : M/s Raiipur Energen Limited
Village: Raikhed, Block-Tilda Dist. Raipur -493225
(CG) Talabira Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Near Petrol Pump
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/IAI/RDS/23/FPS/23
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 21/02/2021 To 22/02/2021
Time of Monitoring : 11.30 to 11.30 Hrs.
Ambient Temperature (°C) : Min 11 Max 24
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS:5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>58.06</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>36.98</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006, RA. 2017</td>
<td>17.02</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.17</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

DINESH PALSAHANIYA
(DY TECHNICAL MANAGER)

RAJ KUMAR YADAV
(AUTHORIZED SIGNATORY)

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AA/07
Name & Address of the Party: M/s Raipur Energen Limited
   Village: Raikheda, Block-Tilda Dist. Raipur -493225
   (CG)Talabira Mines

Sample Description: AMBIENT AIR

General Information
Sampling Location: In Front of the Mine Office
Sample Collected by: VEL Team
Sampling Equipment used: RDS/FPS
Instrument Code: VEUJAI/RDS/24/FPS/24
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 21/02/2021 To 22/02/2021
Time of Monitoring: 12.30 to 12.30 Hrs
Ambient Temperature (°C): Min 11 Max 24
Surrounding Activity: Human, Vehicular & Plant Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs.
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>69.42</td>
<td>µg/m³</td>
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<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>32.88</td>
<td>µg/m³</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P- 6)-2006 RA.2017</td>
<td>19.32</td>
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<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>9.59</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AA/08  
**Name & Address of the Party:** M/s Raipur Enercon Limited  
Village: Raksheda, Block-Tilda Dist. Raipur -493225  
(CG)/Talabira Mines

**Report No.:** VEL/A/2102250014/B  
**Format No.:** 7.8 F-01  
**Party Reference No.:** NIL  
**Report Date:** 27/02/2021  
**Period of Analysis:** 25/02/2021-27/02/2021  
**Receipt Date:** 25/02/2021

**Sample Description:** AMBIENT AIR

## General Information
- **Sampling Location:** A1 Down Wind Point of Talabra Mine Area
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/VOC
- **Instrument Code:** VEL/JAR/RDS/2/VOC/01
- **Instrument Calibration Status:** Calibrated
- **Latitude:** --
- **Longitude:** --
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 21/02/2021 To 22/02/2021
- **Time of Monitoring:** 13:30 to 13:30 Hrs.
- **Ambient Temperature (°C):** Min 11 Max 24
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS : 5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

## Results

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS:5182 (P-11) : 2005, RA 2017</td>
<td>BDL (&quot;DL1.0 µg/m³&quot;)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5182 (P-12) : 2004</td>
<td>*BDL (&quot;DL=5.0ng/ m³&quot;)</td>
<td>ng/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

**BDL-Below Detection Limit DL-Detection Limit**

***End of Report***

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**Note:** Terms & conditions refer on backside of test report.

---

**Ph:** 0141-2983404, 9810355569, 9953147268  
**E-mail:** jaipur@vardanvironet.com
Test Report

Sample Number : VEL/REL/AN/01
Name & Address of the Party : M/s Raipur Environ Limited
  Village: Raikeda, Block-Tilda Dist. Raipur -493225
  (CG) Talabira Mines

Sample Description : Ambient Noise
Scope of Monitoring : Regulatory Requirement
Protocol Used : IS 9989: IS 9876
Instrument Used : SLM

General Information
Sampling Location : In Front of the mine office
Institution Code : VEL/RAI/SLM/05
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/02/2021 To 21/02/2021
Time of Monitoring : 06.00 to 06.00 Hrs.
Ambient Temperature (°C) : Min 11 Max 24
Surrounding Activity : Human, Vehicular & Plant Activity
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Leq</th>
<th>Test Result dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>62.33</td>
<td>48.54</td>
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</table>

Category of Zones

<table>
<thead>
<tr>
<th></th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.
2. Night Time is reckoned between 10.00 PM to 6.00 AM.
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

V. KUMAR
(Checked By)
TECHNICAL MANAGER

RAJ KUMAR YADAV

***End of Report***
# Test Report

**Sample Number:** VEL/RELJAN/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur - 493225  
(CG) Talabira Mines

**Sample Description:** Ambient Noise  
**Scope of Monitoring:** Regulatory Requirement  
**Protocol Used:** IS 9589: IS 9876  
**Instrument Used:** SLM

---

**General Information**

- **Sampling Location:** Near Petrol Pump  
- **Instrument Code:** VEL/JAI/SLM/06  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 20/02/2021 To 21/02/2021  
- **Time of Monitoring:** 06.00 to 06.00 Hrs.  
- **Ambient Temperature (°C):** Min 11 Max 24  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Parameter Required:** As Per Work Order

---

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Leq</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9589 - 1981</td>
<td>60.21</td>
<td>47.25</td>
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### Category of Zones

<table>
<thead>
<tr>
<th>Zone</th>
<th>Leq in dB(A)</th>
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<tbody>
<tr>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM.  
2. Night Time is reckoned between 10.00 PM to 6.00 AM  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.  

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

---

**VIJAY KUMAR**  
(Checked By)  
**TECHNICAL MANAGER**

***End of Report***  
**RAJ KUMAR YADAV**  
(Authorized Signatory)  
**G M LAB OPERATION**

---

**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AN/03
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 493225
(CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: Near Weight Bridge
Instrument Code: VEL/UA/SLM/07
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 20/02/2021 To 21/02/2021
Time of Monitoring: 06.00 to 06.00 Hrs.
Ambient Temperature (°C): Min 11 Max 24
Surrounding Activity: Human, Vehicular & Plant Activity
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
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Category of Zones

<table>
<thead>
<tr>
<th>Category of Zones</th>
<th>Leq in dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
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</tr>
<tr>
<td>Industrial</td>
<td>75</td>
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<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM
2. Night Time is reckoned between 10.00 PM to 6.00 AM
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

V
(Checked By)

TECHNICAL MANAGER

RAJ KUMAR YADAV
(Authorized Signature)

G M LAB OPERATION

Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines

**Sample Description:** GROUND WATER  
**Location:** R&R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012

<table>
<thead>
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<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
<th>Acceptable Limits</th>
<th>Permissible Limits</th>
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<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 Reaff. 2017</td>
<td>7.54</td>
<td>--</td>
<td></td>
<td>6.5 to 8.5</td>
<td>No Relaxation</td>
</tr>
<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS: 3025 (Part 23): 1986, Reaff. 2019</td>
<td>126.1</td>
<td>mg/l</td>
<td>200</td>
<td>600</td>
<td></td>
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<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS: 3025 (Part 21): 2009, Reaff. 2019</td>
<td>184</td>
<td>mg/l</td>
<td>200</td>
<td>600</td>
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<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS: 3025 (Part 34): 1986, Reaff. 1998</td>
<td>2.37</td>
<td>mg/l</td>
<td>45</td>
<td>No Relaxation</td>
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<tr>
<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS: 3025 (Part 32): 1986, Reaff. 1998</td>
<td>71.8</td>
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<td>250</td>
<td>1000</td>
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<td>Sulphate (as SO4)</td>
<td>IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method</td>
<td>14.36</td>
<td>mg/l</td>
<td>200</td>
<td>400</td>
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<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS: 3025 (Part 40): 1991 Reaff. 1994, Reaff. 2009 (EDTA method)</td>
<td>64.53</td>
<td>mg/l</td>
<td>75</td>
<td>200</td>
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<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)</td>
<td>5.6</td>
<td>mg/l</td>
<td>30</td>
<td>100</td>
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<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4500 FD</td>
<td>0.21</td>
<td>mg/l</td>
<td>1.0</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Phenolic Compound (as C6H5OH)</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>BDL(&quot;DL-0.001&quot;)</td>
<td>mg/l</td>
<td>0.001</td>
<td>0.002</td>
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<tr>
<td>12</td>
<td>Total Iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>*BDL(&quot;DL-0.1&quot;)</td>
<td>mg/l</td>
<td>0.3</td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>*BDL(&quot;DL-0.005&quot;)</td>
<td>mg/l</td>
<td>0.01</td>
<td>0.05</td>
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</tr>
<tr>
<td>14</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL(&quot;DL-0.005&quot;)</td>
<td>mg/l</td>
<td>0.001</td>
<td>No Relaxation</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL(&quot;DL-0.005&quot;)</td>
<td>mg/l</td>
<td>0.01</td>
<td>No Relaxation</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL(&quot;DL-0.002&quot;)</td>
<td>mg/l</td>
<td>0.003</td>
<td>No Relaxation</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>*BDL(&quot;DL-0.02&quot;)</td>
<td>mg/l</td>
<td>0.05</td>
<td>No Relaxation</td>
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</tr>
<tr>
<td>18</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3111B</td>
<td>*BDL(&quot;DL-0.02&quot;)</td>
<td>mg/l</td>
<td>0.05</td>
<td>1.5</td>
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</tr>
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<td>19</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL(&quot;DL-0.20&quot;)</td>
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<td>15</td>
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<tr>
<td>20</td>
<td>Selenium (as Se)</td>
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<td>0.01</td>
<td>No Relaxation</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
## Test Report

**Sample Number:** VEL/REL/GW/01  
**Report No.:** VEL/W/21022250007/A

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Acceptable Limits</strong></td>
<td><strong>Permissible Limits</strong></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>BDL**(DL-0.03)**</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>23</td>
<td>Manganese (as Mn)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)</td>
<td>BDL**(DL-0.05)**</td>
<td>mg/l</td>
<td>0.1</td>
</tr>
<tr>
<td>24</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017 Method No. 4500B</td>
<td>BDL**(DL-0.2)**</td>
<td>mg/l</td>
<td>0.5</td>
</tr>
<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS: 3025 (Part 26): 1986 RA 2019</td>
<td>BDL**(DL-0.2)**</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

---

**Note:** Terms & conditions refer on backside of test report.

**www.vardan.co.in**

**Ph:** 0141-2983404, 9810355569, 9953147268  
**E-mail:** jaipur@vardanenvironet.com
## Test Report

**Sample Number:** VEL/REL/GW/01  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikhelda, Block-Tilda Dist. Raipur -493225  
(CG) Talabira Mines  

**Sample Description:** GROUND WATER  
**Location:** R&R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500 -2012  

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS:10500-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/10 0 ml</td>
<td>Shall not be Detectable in any 100 ml sample</td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500CN D</td>
<td>*BDL(**DL-0.05) mg/l</td>
<td>0.05</td>
<td>No Relaxation</td>
</tr>
<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025: 1983 (P-4) RA... 2017</td>
<td>*BDL(**DL-1.0) Hazen Unit</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-5): RA. 2018</td>
<td>Agreeable Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
</tr>
<tr>
<td>6</td>
<td>Taste</td>
<td>IS 3025(P-8):1984 RA. 2017</td>
<td>Agreeable Qualitative</td>
<td>Agreeable</td>
<td>Agreeable</td>
</tr>
<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL(**DL-0.05) mg/l</td>
<td>0.2</td>
<td>1.0</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit  

---

**Signatures:**  
**Dinesh Palsaniya**  
Checked By  
**Raj Kumar Yadav**  
Authorized Signatory  
G M LAB OPERATION  

---

**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/WW/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikbreda, Block-Tilda Dist. Raipur - 493225 (CG) Talibira Mines

Sample Description: Waste Water
Location: STP Outlet
Sample Collected by: VEL Team
Parameter Required: As Per Work Order
Sampling and Analysis Protocol: IS 3025

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1983 RA2017</td>
<td>7.28</td>
<td>-</td>
<td>5.5 - 9.0</td>
</tr>
<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17): 1984, RA2017</td>
<td>23.40</td>
<td>mg/l</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-39):1991 RA 2019</td>
<td>0.7</td>
<td>mg/l</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 3025 (Part-44): 1993, RA: 2019</td>
<td>12.60</td>
<td>mg/l</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA: 2017</td>
<td>40.48</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

***End of Report***

DINESH PALSANIYA
(Checked By)

RAJ KUMAR YADAV
(Authorized Signatory)

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AAR/01
Report No.: VEL/A/2/03240001/A
Name & Address of the Party: Ms Raipur Energ Limited
Village: Ratkheda, Block-TICCA Dist. Raipur-493225
(CG) Talebira Mines
Format No.: 7.8 F-01
Party Reference No.: NIL
Report Date: 31/03/2021
Period of Analysis: 24/03/2021-31/03/2021
Receipt Date: 24/03/2021

Sample Description: AMBIENT AIR

General Information:
- Sampling Location: Res/ Shelter 1.5 KM in SE From the Mine
- Sample Collected by: VEL Team
- Sampling Equipment used: RDS/FPS
- Instrument Code: VEL/RAIR/GDS/22/FPS/22
- Instrument Calibration Status: Calibrated
- Latitude: --
- Longitude: --
- Meteorological condition during monitoring: Clear Sky
- Date of Monitoring: 19/03/2021 To 20/03/2021
- Time of Monitoring: 10.00 to 10.00 Hrs.
- Ambient Temperature (°C): Min 19 Max 32
- Surrounding Activity: Human, Vehicular & Plant Activity
- Scope of Monitoring: Regulatory Requirement
- Sampling & Analysis Protocol: IS: 5182
- Sampling Duration: 24 Hrs.
- Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS : 5182 (P- 23)-2006, RA. 2017</td>
<td>76.29</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS : 5182 (P-24)-2019</td>
<td>37.27</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>IS : 5182 (P- 6)-2006, RA. 2017</td>
<td>22.35</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS : 5182 (P-2)-2001, RA. 2017</td>
<td>19.97</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA. 2014</td>
<td>BDL (DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>BDL (DL 1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.6</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed., 1988, Method No.807:1988</td>
<td>BDL (DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL: Below Detection Limit; DL: Detection Limit

***End of Report***

DINESHPAL SAPIYA
(Checked By)

RAJ KUMAR YADAV
(Authorized Signatory)

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Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/01
Name & Address of the Party : M/s Raipur Energen Limited
Village : Raikheeda, Block-Tilda Dist. Raipur -493225 (CG)Tabalire Mines

Sample Description : AMBIENT AIR

General Information
Sampling Location : Rest Shelter 1.5 KM in SE From the Mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/22/FPS/22
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 19/03/2021 To 20/03/2021
Time of Monitoring : 10:00 to 10:00 Hrs.
Ambient Temperature (°C) : Min 19 Max 32
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (DL1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL** (Below Detection Limit) DL Detection Limit

---

1. **End of Report**

DINISH PALANSANGA (Checked By)
BY TECHNICAL MANAGER

RAJ KUMAR YADAV
(Author and Signatory)

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
**Test Report**

**Sample Number:** VEL/REL/AA/02  
**Name & Address of the Party:** M/s Rajipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Rajipur -493225  
(CO) Talabra Mines

**Sample Description:** AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
</tr>
</thead>
</table>
| Sampling Location   | R&R Colony 3.2 Km in NE From the Mine  
| Sample Collected by | VEL Team  
| Sampling Equipment used | RDS/FP3  
| Instrument Calibration Status | Calibrated  
| Latitude             | --  
| Longitude            | --  
| Meteorological condition during monitoring | Clear Sky  
| Date of Monitoring   | 19/03/2021 To 20/03/2021  
| Time of Monitoring   | 11.00 to 11.00 Hrs.  
| Ambient Temperature (°C) | Min 19 Max 32  
| Surrounding Activity | Human, Vehicular & Plant Activity  
| Scope of Monitoring  | Regulatory Recurrence  
| Sampling & Analysis Protocol | IS :5182  
| Sampling Duration    | 24 Hrs.  
| Parameter Required   | As Per Work Order  

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS: 5182 (P- 23)-2006,RA. 2017</td>
<td>73.26</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS: 6182 (P- 24)-2019</td>
<td>33.50</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS: 5182 (P- 6)-2006 RA.2017</td>
<td>18.49</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS: 5182 (P- 2)-2001. RA. 2017</td>
<td>10.80</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) ; 2004 RA.2014</td>
<td>BDL (DL 0.02 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.332</td>
<td>BDL (DL&lt;1.0 ng/m³)</td>
<td>ng/m³</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed, 1988, Method No.807:1988</td>
<td>BDL(DL 1.0)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDL (**Below Detection Limit**); DL: Detection Limit

*End of Report***

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**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/02
Name & Address of the Party : M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -493225
(CO) Talabira Mines

Report No. : VEL/A/2103240002/8
Format No. : 7.8 F.01
Party Reference No. : NIL
Report Date : 31/03/2021
Period of Analysis : 24/03/2021-31/03/2021
Receipt Date : 24/03/2021

Sample Description : AMBIENT AIR

General Information
Sampling Location : R&R Colony 3.2 Km in NE From the Mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/23/FPS/23
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 19/03/2021 To 20/03/2021
Time of Monitoring : 11.00 to 11.00 Hrs.
Ambient Temperature (°C) : Min 19 Max 32
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (<em>DL1.0 ng/m³</em>)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

**End of Report**

Dinesh Palsaniya
(Checked By)

Dharmendra Verma
(Technical Manager)

Raj Kumar Yadav
(Authorised Signatory)

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Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/AA/03  
**Name & Address of the Party:** M/s Rajpur Energen Limited  
Village: Rakhteda, Block-Tilda Dist. Raipur -492225  
(CO) Talibara Mines  

**Sample Description:** AMBIENT AIR

**General Information**
- **Sampling Location:** Village - Khinda 3 KM in SE From the Mine
- **Sample Collected by:** VEL Team
- **Sampling Equipment used:** RDS/FPS
- **Instrument Code:** VEL/JAI/RDS/2/FPS/24
- **Instrument Calibration Status:** Calibrated
- **Latitude:**  
- **Longitude:**  
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 16/03/2021 To 20/03/2021
- **Time of Monitoring:** 12.00 to 12.00 Hrs.
- **Ambient Temperature (°C):** Min 19 Max 32
- **Surrounding Activity:** Human, Vehicular & Plant Activity
- **Scope of Monitoring:** Regulatory Requirement
- **Sampling & Analysis Protocol:** IS-5182
- **Sampling Duration:** 24 Hrs.
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)-2006,RA. 2017</td>
<td>70.24</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM -2.5)</td>
<td>IS:5182 (P-24)-2019</td>
<td>39.16</td>
<td>µg/m³</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-8)-2009,RA.2017</td>
<td>19.26</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS:5182 (P-2)-2001,RA. 2017</td>
<td>10.49</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5182 (P-22) : 2004 RA.2014</td>
<td>*BDL(*<em>DL-0.05 µg/m³</em>)</td>
<td>µg/m³</td>
<td>1.0</td>
</tr>
<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No.302</td>
<td>*BDL(*<em>DL-1.0 ng/m³</em>)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed. 1989, Method No.607:1988</td>
<td>*BDL(*<em>DL-0.2µg/m³</em>)</td>
<td>µg/m³</td>
<td>–</td>
</tr>
</tbody>
</table>

BDL**(Below Detection Limit) DL Detection Limit

***End of Report***

---

**DINESH PALSANIYA**  
(Checked By)  
**TECHNICAL MANAGER**

**RAJ KUMAR YADAV**  
(Authorized Signatory)

**www.vardan.co.in**

**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/03
Name & Address of the Party : M/s Rajpur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur -492225
(GO) Talabara Mines

Report No. : VEL/A2103240003/B
Format No. : 7.8 F-01
Party Reference No. : NIL
Report Date : 31/03/2021
Period of Analysis : 24/03/2021-31/03/2021
Receipt Date : 24/03/2021

Sample Description : AMBIENT AIR

General Information
Sampling Location : Village - Khnda 3 KM in SE From the Mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RCS/2/FPS/24
Instrument Calibration Status : Calibrated
Latitude : --
Longitude : --

Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 19/03/2021 To 20/03/2021
Time of Monitoring : 12.00 to 12.00 Hrs.
Ambient Temperature (°C) : Min 19 Max 32
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS : 5182
Sampling Duration : 24 Hrs
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis, 3rd ed., 1988, Method No. 317</td>
<td>BDL (&quot;DL1.0 ng/m²&quot;)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

BDE** (Below Detection Limit) DL Detection Limit

***End of Report***

DINESH PALSANIYA
(Checked By)

RAJ KUMAR YADAV
(Authorized Signatory)

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.

Page No. 1/1
## Test Report

**Sample Number:** VEL/REL/AA/04  
**Name & Address of the Party:** M/s Rajpur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Rajpur -485225  
(CO) Talabia Mines

**Report No.:** VELA/2103240004/A  
**Format No.:** 7.9 F-01  
**Party Reference No.:** NIL  
**Report Date:** 31/03/2021  
**Period of Analysis:** 24/03/2021-31/03/2021  
**Receipt Date:** 24/03/2021

**Sample Description:** AMBIENT AIR

**General Information**  
**Sampling Location:** Village - Babu Khinda 3 Km in NE From the mine

**Sample Collected by:** VEL Team  
**Sampling Equipment used:** RDS/FPS

**Instrument Code:** VEL/JAI/RDS/25/FPS/25  
**Instrument Calibration Status:** Calibrated

**Latitude:** —  
**Longitude:** —

** Meteorological condition during monitoring:** Clear Sky

**Date of Monitoring:** 10/03/2021 To 20/03/2021

**Time of Monitoring:** 12.00 to 13.00 Hrs.

**Ambient Temperature (°C):** Min 19 Max 32

**Surrounding Activity:** Human, Vehicular & Plant Activity

**Scope of Monitoring:** Regulatory Requirement

**Sampling & Analysis Protocol:** IS: 5182

**Sampling Duration:** 24 Hrs

**Parameter Required:** As Per Work Order

### Results Table

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter</td>
<td>IS:5182 (P-23)-2006,RA. 2017</td>
<td>64.36</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter</td>
<td>IS:5182 (P-24)-2019</td>
<td>26.37</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxide</td>
<td>IS:5182 (P-6)-2006 RA. 2017</td>
<td>18.35</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulfur Dioxide</td>
<td>IS:5182 (P-2)-2001, RA. 2017</td>
<td>9.19</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

**Checked By:** 

**Authorized Signatory:**

---

**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AA/05
Name & Address of the Party: Ms Raipur Energen Limited
Village: Raikeda, Block-Tilda Dist. Raipur-493225
(CG) Talabira Mines

Sample Description: AMBIENT AIR

<table>
<thead>
<tr>
<th>General Information</th>
<th>AMBIENT AIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling Location</td>
<td>Village - Babu Khinda 3 Km in NE from the mine</td>
</tr>
<tr>
<td>Sample Collected by</td>
<td>VEL Team</td>
</tr>
<tr>
<td>Sampling Equipment used</td>
<td>RDS/FPS</td>
</tr>
<tr>
<td>Instrument Code</td>
<td>VEL/JAI/RDS/22/FPS/22</td>
</tr>
<tr>
<td>Instrument Calibration Status</td>
<td>Calibrated</td>
</tr>
<tr>
<td>Latitude</td>
<td>--</td>
</tr>
<tr>
<td>Longitude</td>
<td>--</td>
</tr>
<tr>
<td>Meteorological condition during monitoring</td>
<td>Clear Sky</td>
</tr>
<tr>
<td>Date of Monitoring</td>
<td>20/03/2021 To 21/03/2021</td>
</tr>
<tr>
<td>Time of Monitoring</td>
<td>10:00 to 10:00 Hrs.</td>
</tr>
<tr>
<td>Ambient Temperature (°C)</td>
<td>Min 16 Max 33</td>
</tr>
<tr>
<td>Surrounding Activity</td>
<td>Human, Vehicular &amp; Plant Activity</td>
</tr>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Sampling &amp; Analysis Protocol</td>
<td>IS:5182</td>
</tr>
<tr>
<td>Sampling Duration</td>
<td>24 Hrs</td>
</tr>
<tr>
<td>Parameter Required</td>
<td>As Per Work Order</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P-23)2006,RA.2017</td>
<td>71.25</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P-24)2019</td>
<td>32.22</td>
<td>µg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS:5182 (P-6)2006,RA.2017</td>
<td>22.13</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxides (as SO2)</td>
<td>IS:5182 (P-2)2001,RA.2017</td>
<td>10.52</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>Lead (as Pb)</td>
<td>IS 5132 (P-22) : 2004 RA.2014</td>
<td>*BDL(“DL-0.05 µg/m³)</td>
<td>µg/m³</td>
<td>1.0</td>
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<tr>
<td>6</td>
<td>Arsenic (as As)</td>
<td>Methods of air sampling and analysis,3rd ed,1988, Method No.302</td>
<td>*BDL(“DL-1.0 ng/m³)</td>
<td>ng/m³</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>Chromium as Cr</td>
<td>Methods of air sampling and analysis, 3rd Ed,1988,Method No.607:1988</td>
<td>*BDL(“DL-0.2µg/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

***End of Report***

(Checked By)

By Technical Manager

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number : VEL/REL/AA/05
Name & Address of the Party : Mrs Rajpur Energien Limited
                    Village: Raikheda, Block-Tilda Dist. Rapur -493225
                    (CG)Talabira Mines
Sample Description : AMBIENT AIR

General Information
Sampling Location : Village - Babu Khinda 3 Km in NE From the mine
Sample Collected by : VEL Team
Sampling Equipment used : RDS/FPS
Instrument Code : VEL/JAI/RDS/22/FPS/22
Instrument Calibration Status : Calibrated
Latitude : –
Longitude : –
Meteorological condition during monitoring : Clear Sky
Date of Monitoring : 20/03/2021 To 21/03/2021
Time of Monitoring : 10.00 to 10.00 Hrs.
Ambient Temperature (°C) : Min 18 Max 33
Surrounding Activity : Human, Vehicular & Plant Activity
Scope of Monitoring : Regulatory Requirement
Sampling & Analysis Protocol : IS :5162
Sampling Duration : 24 Hrs.
Parameter Required : As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mercury (Hg)</td>
<td>Methods of air sampling and analysis,3rd ed.,1988, Method No.317</td>
<td>BDL (*DL.1.0 ng/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL-Below Detection Limit, **DL-Detection Limit

DINESH PALSANIYA
(Checked By)

RAJ KUMAR YADAV
(Authorized Signatory)

Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AA/06  
**Name & Address of the Party:** Ms. Rajpur Enegrg Limited  
Village: Rakhera, Block-Tilda Dist. Rajpur - 493225  
(CG) Talabra Mines  
**Report No.:** VEL/A/2103240605/A  
**Format No.:** 7.0 F-01  
**Party Reference No.:** NIL  
**Report Date:** 31/03/2021  
**Period of Analysis:** 24/03/2021 to 31/03/2021  
**Receipt Date:** 24/03/2021  
**Sample Description:** AMBIENT AIR

**General Information**  
**Sampling Location:** Near Petrol Pump  
**Sample Collected by:** VEL Team  
**Sampling Equipment used:** RDS/FPS  
**Instrument Code:** VEL/JAI/RDS/23/FPS/23  
**Instrument Calibration Status:** Calibrated  
**Latitude:** --  
**Longitude:** --  
**Meteorological condition during monitoring:** Clear Sky  
**Date of Monitoring:** 20/03/2021 to 21/03/2021  
**Time of Monitoring:** 11:00 to 11:00 Hrs.  
**Ambient Temperature (°C):** Min 18 Max 33  
**Surrounding Activity:** Human, Vehicular & Plant Activity  
**Scope of Monitoring:** Regulatory Requirement  
**Sampling & Analysis Protocol:** IS:5162  
**Sampling Duration:** 24 Hrs.  
**Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS:5182 (P- 23)-2006, RA. 2017</td>
<td>59.12</td>
<td>µg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS:5182 (P- 24)-2019</td>
<td>36.94</td>
<td>µg/m³</td>
<td>20</td>
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<tr>
<td>3</td>
<td>Nitrogen Dioxide (as NO₂)</td>
<td>IS:6182 (P- 6)-2005 RA.2017</td>
<td>16.85</td>
<td>µg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO₂)</td>
<td>IS:5182 (P- 2)-2001, RA. 2017</td>
<td>8.11</td>
<td>µg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

---

**DINESH PALSANIYA**  
(Reviewed By)  
**S. KUMAR YADAV**  
(Authorised Signatory)

---

www.vardan.co.in  
Note: Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/AA/07  
**Name & Address of the Party:** Ws Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur-493225  
(CG) Talatara Mines  

**Report No.:** VEL/AI21032400007/A  
**Format No.:** 7.3 F-01  
**Party Reference No.:** NIL  
**Report Date:** 31/03/2021  
**Period of Analysis:** 24/03/2021-31/03/2021  
**Receipt Date:** 24/03/2021  

**Sample Description:** AMBIENT AIR  

### General Information  
- **Sampling Location:** In Front of the Mine office  
- **Sample Collected by:** VEL Team  
- **Sampling Equipment used:** RDS/FPS  
- **Instrument Code:** VEL/AI/RDS/24/FPS/24  
- **Instrument Calibration Status:** Calibrated  
- **Latitude:** --  
- **Longitude:** --  
- **Meteorological condition during monitoring:** Clear Sky  
- **Date of Monitoring:** 20/03/2021 To 21/03/2021  
- **Time of Monitoring:** 12.00 to 12.00 Hrs.  
- **Ambient Temperature (°C):** Min 10 Max 33  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Scope of Monitoring:** Regulatory Requirement  
- **Sampling & Analysis Protocol:** IS : 5182  
- **Sampling Duration:** 24 Hrs  
- **Parameter Required:** As Per Work Order  

### Parameters Table

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM -10)</td>
<td>IS: 5182 (P-23) - 2006, RA. 2017</td>
<td>71.36</td>
<td>μg/m³</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM - 2.5)</td>
<td>IS: 5182 (P-24) - 2019</td>
<td>33.36</td>
<td>μg/m³</td>
<td>60</td>
</tr>
<tr>
<td>3</td>
<td>Nitrogen Dioxides (as NO2)</td>
<td>IS: 5182 (P-6) - 2006 RA. 2017</td>
<td>18.30</td>
<td>μg/m³</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>IS: 5182 (P-2) - 2001, RA. 2017</td>
<td>9.13</td>
<td>μg/m³</td>
<td>80</td>
</tr>
</tbody>
</table>

***End of Report***

(Choked By)  
(TECHNICAL MANAGER)  

Datta PALSANIYA  
(Choked By)  

RAJ KUMAR YADAV  
(Authorized Signatory)  

www.vardan.co.in  

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AA/008
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur-493225
(CG) Talabira Mines

Sample Description: AMBIENT AIR

General Information
Sampling Location: A1 Down Wind point of Talabira mine area
Sample Collected by: VEL Team
Sampling Equipment used: RDS/VOC
Instrument Code: VEL/AAR/RDS/25/VOC/01
Instrument Calibration Status: Calibrated
Latitude: --
Longitude: --
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 20/03/2021 to 31/03/2021
Time of Monitoring: 13:00 to 13:00 Hrs.
Ambient Temperature (°C): Min 10 Max 33
Surrounding Activity: Human, Vehicular & Plant Activity
Scope of Monitoring: Regulatory Requirement
Sampling & Analysis Protocol: IS:5182
Sampling Duration: 24 Hrs

Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Parameters</th>
<th>Test Method</th>
<th>Results</th>
<th>Units</th>
<th>Limit as per CPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volatile Organic Compound (as BTX)</td>
<td>IS:5182 (P-11): 2006, RA 2017</td>
<td>BDL (DL1.0 µg/m³)</td>
<td>µg/m³</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Polycyclic Aromatic Hydrocarbon (as PAH)</td>
<td>IS:5162 (P-12): 2004</td>
<td>*SDL (SDL 6.0 ng/m³)</td>
<td>ng/m³</td>
<td>--</td>
</tr>
</tbody>
</table>

*BDL - Below Detection Limit, **DL - Detection Limit

**End of Report**

Dinesh Chandra
Checked By

By Technical Manager

Raj Kumar Yadav
(Authorized Signatory)

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/AN/01
Name & Address of the Party: M/s Raipur Energen Limited
Village: Raikheda, Block-Tilda Dist. Raipur - 453225
(CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: In Front of the mine office
Instrument Code: VEL/RAI/SLM/05
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 19/03/2021 To 20/03/2021
Time of Monitoring: 06:00 to 06:00 Hrs.
Ambient Temperature (°C): Min 18 Max 33
Surrounding Activity: Human, Vehicular & Plant Activity
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9969 - 1981</td>
<td>52.86</td>
</tr>
</tbody>
</table>

Category of Zones

<table>
<thead>
<tr>
<th>Category</th>
<th>Leq in dB(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>75</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
</tr>
<tr>
<td>Silence</td>
<td>50</td>
</tr>
<tr>
<td>Night</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>45</td>
</tr>
<tr>
<td>Silence</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is 6.00 AM to 10.00 PM
2. Night Time is reckoned between 10.00 PM to 6.00 AM
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

End of Report

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com

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Note: Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/REL/AN/02  
**Name & Address of the Party:** M/s Raipur Energen Limited  
Village: Raikheda, Block-Tilda Dist. Raipur -493225 (CG) Talabira Mines

<table>
<thead>
<tr>
<th>Sample Description</th>
<th>Ambient Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope of Monitoring</td>
<td>Regulatory Requirement</td>
</tr>
<tr>
<td>Protocol Used</td>
<td>IS 9589: IS 9876</td>
</tr>
<tr>
<td>Instrument Used</td>
<td>SLM</td>
</tr>
</tbody>
</table>

**General Information**
- **Sampling Location:** Near Petrol Pump  
- **Instrument Code:** VEL/JAI/SLM/06  
- **Meteorological condition during monitoring:** Clear Sky
- **Date of Monitoring:** 19/03/2021 To 20/03/2021  
- **Time of Monitoring:** 06:00 to 08:00 Hrs.  
- **Ambient Temperature (°C):** Min 18 Max 33  
- **Surrounding Activity:** Human, Vehicular & Plant Activity  
- **Parameter Required:** As Per Work Order

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Day Time</th>
<th>Night Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9969 - 1991</td>
<td>61.45</td>
<td>48.47</td>
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**Leq in dB(A) by Category of Zones**

<table>
<thead>
<tr>
<th>Category of Zones</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>55</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 6.00 AM to 10.00 PM  
2. Night Time is reckoned between 10.00 PM to 6.00 AM  
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is barred in these zones.  

**End of Report**

---

**Note:** Terms & conditions refer on back side of test report.
Test Report

Sample Number: VEL/REL/AN/03
Name & Address of the Party: M/s Raiipur Energi Limited
Village: Raikeda, Block-Tilda Dsl. Raiipur - 493225 (CG) Talabira Mines

Sample Description: Ambient Noise
Scope of Monitoring: Regulatory Requirement
Protocol Used: IS 9989: IS 9876
Instrument Used: SLM

General Information
Sampling Location: Near Weight Bridge
Instrument Code: VEL/JAI/SLM/06
Meteorological condition during monitoring: Clear Sky
Date of Monitoring: 20/03/2021 To 21/03/2021
Time of Monitoring: 06.00 to 06.00 Hrs.
Ambient Temperature (°C): Min 18 Max 33
Surrounding Activity: Human, Vehicular & Plant Activity
Parameter Required: As Per Work Order

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Protocol</th>
<th>Test Result dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Day Time</td>
</tr>
<tr>
<td>1</td>
<td>Leq</td>
<td>IS 9989 - 1981</td>
<td>54.71</td>
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</tbody>
</table>

Category of Zones

<table>
<thead>
<tr>
<th>Category</th>
<th>Day</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial</td>
<td>75</td>
<td>70</td>
</tr>
<tr>
<td>Commercial</td>
<td>65</td>
<td>60</td>
</tr>
<tr>
<td>Residential</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>Silence Zone</td>
<td>50</td>
<td>40</td>
</tr>
</tbody>
</table>

1. Day Time is from 06.00 AM to 10.00 PM
2. Night Time is reckoned between 10.00 PM to 6.00 AM
3. Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.
Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply.

***End of Report***

(Checked By) V. ENDRAKUMAR
TECHNICAL MANAGER

(Authorized Signatory) RAJ KUMAR YADAV

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com
# Test Report

**Sample Number:** VELRELW/01  
**Name & Address of the Party:** M/s Rapur Energet Limited  
**Village:** Raikedia, Block-Tilda Dist. Raipur 493225  
(CG) Talaroo Mines  
**Sample Description:** GROUND WATER  
**Location:** R&R Colony (Open Well)  
**Sample Collected by:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500-2012  

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS-10500-2012</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td>Acceptable Limits</td>
</tr>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3025 (P-11): 1883 Reaff. 2017</td>
<td>7.41</td>
<td>mg/l</td>
<td>6.5 to 8.5</td>
</tr>
<tr>
<td>2</td>
<td>Total Dissolved Solids</td>
<td>IS 3025 (P-16): 1964 Reaff. 2017</td>
<td>255.60</td>
<td>mg/l</td>
<td>500</td>
</tr>
<tr>
<td>3</td>
<td>Total Alkalinity (as CaCO3)</td>
<td>IS: 3025 (Part 23): 1985, Reaff. 2019</td>
<td>129.28</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>4</td>
<td>Total Hardness (as CaCO3)</td>
<td>IS: 3025 (Part 21): 2009, Reaff. 2019</td>
<td>174.60</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>5</td>
<td>Nitrate (as NO3)</td>
<td>IS: 3025 (Part 34): 1988, Reaff. 2019</td>
<td>3.03</td>
<td>mg/l</td>
<td>45</td>
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<tr>
<td>6</td>
<td>Chloride (as Cl)</td>
<td>IS: 3025 (Part 32): 1988, Reaff. 2019</td>
<td>57.43</td>
<td>mg/l</td>
<td>250</td>
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<tr>
<td>7</td>
<td>Sulphate (as SO4)</td>
<td>IS: 3025 (Part 24): 1996, Reaff. 2019</td>
<td>12.30</td>
<td>mg/l</td>
<td>200</td>
</tr>
<tr>
<td>8</td>
<td>Calcium (as Ca)</td>
<td>IS: 3025 (Part 40): 1994 Reaff. 2019</td>
<td>50.34</td>
<td>mg/l</td>
<td>75</td>
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<tr>
<td>9</td>
<td>Magnesium (as Mg)</td>
<td>IS: 3025 (Part 40): 1994, Reaff. 2009 (EDTA method)</td>
<td>5.58</td>
<td>mg/l</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>Fluorides (as F)</td>
<td>APHA 23rd Edition 2017, 4606 FD</td>
<td>0.22</td>
<td>mg/l</td>
<td>1.0</td>
</tr>
<tr>
<td>11</td>
<td>Phenolic Compound (as C6H5OH)</td>
<td>APHA 23rd Edition 2017, 5530C</td>
<td>*BDL (DL-0.001)</td>
<td>mg/l</td>
<td>0.001</td>
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<tr>
<td>12</td>
<td>Total iron (as Fe)</td>
<td>IS 3025(P-53): 2003 Reaffirm 2019</td>
<td>*BDL (DL-0.1)</td>
<td>mg/l</td>
<td>0.3</td>
</tr>
<tr>
<td>13</td>
<td>Arsenic (as As)</td>
<td>APHA (23rd edition-2017), 3114 C</td>
<td>*BDL (DL-0.005)</td>
<td>mg/l</td>
<td>0.01</td>
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<tr>
<td>14</td>
<td>Mercury (as Hg)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL (DL-0.0005)</td>
<td>mg/l</td>
<td>0.001</td>
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<tr>
<td>15</td>
<td>Lead (as Pb)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (DL-0.005)</td>
<td>mg/l</td>
<td>0.01</td>
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<tr>
<td>16</td>
<td>Cadmium (as Cd)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (DL-0.002)</td>
<td>mg/l</td>
<td>0.003</td>
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<tr>
<td>17</td>
<td>Chromium (as Cr)</td>
<td>APHA 23rd Edition Year 2017 Method No. 3113 B</td>
<td>*BDL (DL-0.02)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>18</td>
<td>Copper (as Cu)</td>
<td>APHA 23rd Edition Year 2017 Method No. 31118</td>
<td>*BDL (DL-0.02)</td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>19</td>
<td>Zinc (as Zn)</td>
<td>APHA (23rd edition-2017), 3030D, 3113 B</td>
<td>*BDL (DL-0.02)</td>
<td>mg/l</td>
<td>5.0</td>
</tr>
<tr>
<td>20</td>
<td>Selenium (as Se)</td>
<td>APHA (23rd edition-2017), 3114C</td>
<td>*BDL (DL-0.005)</td>
<td>mg/l</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Note:** Terms & conditions refer on backside of test report.
## Test Report

**Sample Number:** VEL/REL/W/01  
**Report No.:** VEL/W/210324G001/A

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th>IS: 10500-2012</th>
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<tbody>
<tr>
<td></td>
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<td></td>
<td>Acceptable Limits</td>
</tr>
<tr>
<td>22</td>
<td>Aluminium</td>
<td>IS 3025 (Part-55): 2003, Reaff. 2019</td>
<td>BDL (<strong>DL 0.03</strong>)</td>
<td>mg/l</td>
<td>0.03</td>
</tr>
<tr>
<td>23</td>
<td>Manganese (as Mn)</td>
<td>IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)</td>
<td>BDL (<strong>DL 0.05</strong>)</td>
<td>mg/l</td>
<td>0.1</td>
</tr>
<tr>
<td>24</td>
<td>Boron (as B)</td>
<td>APHA 23rd Edition Year 2017 Method No. 4500B</td>
<td>BDL (<strong>DL 0.2</strong>)</td>
<td>mg/l</td>
<td>0.5</td>
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<tr>
<td>25</td>
<td>Free Residual Chlorine</td>
<td>IS: 3025 (Part 26): 1986 RA 2019</td>
<td>BDL (<strong>DL 0.2</strong>)</td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL - Below Detection Limit, **DL - Detection Limit  

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**Note:** Terms & conditions refer on backside of test report.
# Test Report

**Sample Number:** VEL/RHELW/01  
**Name & Address of the Party:** M/s Raipur Energy Limited  
Village: Raikheda, Block-Tide Dist. Raipur -493225  
(CG) Talabira Mines  

**Sample Description:** GROUND WATER  
**Location:** R&R Colony (Open Well)  
**Sample Collected By:** VEL Team  
**Preservation:** Suitable Preservation  
**Sampling and Analysis Protocol:** IS 10500-2012

<table>
<thead>
<tr>
<th>S.No</th>
<th>Parameters</th>
<th>Protocols</th>
<th>Results</th>
<th>Units</th>
<th><strong>IS:10500-2012</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total Coliform (By MPN Method)</td>
<td>IS:1622</td>
<td>Absent</td>
<td>MPN/10 0 ml</td>
<td>Shall not be detectable in any 100 ml sample</td>
</tr>
<tr>
<td>2</td>
<td>E-Coli</td>
<td>IS:1622</td>
<td>Absent</td>
<td>per 100 ml</td>
<td>Absent/100 ml</td>
</tr>
<tr>
<td>3</td>
<td>Cyanide (as CN)</td>
<td>APHA 23rd Edition 2017, 4500CN C</td>
<td>*BDL(**<em>DL-0.05)</em></td>
<td>mg/l</td>
<td>0.05</td>
</tr>
<tr>
<td>4</td>
<td>Colour</td>
<td>IS 3025: 1983 (P-4) RA., 2017</td>
<td>*BDL(**<em>DL 1.0)</em></td>
<td>Hazen Unit</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Odour</td>
<td>IS 3025 (P-5): RA., 2018</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>6</td>
<td>Taste</td>
<td>IS 2025(P-6):1984 RA. 2017</td>
<td>Agreeable</td>
<td>Qualitative</td>
<td>Agreeable</td>
</tr>
<tr>
<td>7</td>
<td>Anionic Surface Active Agent</td>
<td>APHA 23rd Edition 2017, 5540C</td>
<td>*BDL(**<em>DL-0.05)</em></td>
<td>mg/l</td>
<td>0.2</td>
</tr>
</tbody>
</table>

*BDL: Below Detection Limit, **DL: Detection Limit*  

---

**Checked By:** [Signature]  

RAJ KUMAR YADAV  

(ALlowed Signature)  

[C.M. Lab. Operation]

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**Note:** Terms & conditions refer on backside of test report.
Test Report

Sample Number: VEL/REL/WW/01
Name & Address of the Party: M/s Raipur Environ Limited
Village: Raksheda, Block-Tilda Dist. Raipur.-493226
(CG) Talabina Mines

Sample Description: Waste Water
Location: STP Outlet
Sample Collected by: VEL Team
Parameter Required: As Per Work Order
Sampling and Analysis Protocol: IS 3025

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Test Method</th>
<th>Result</th>
<th>Unit</th>
<th>Prescribed Limit</th>
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<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td>IS 3628 (P-11): 1983 RA2017</td>
<td>7.34</td>
<td>-</td>
<td>5.5 - 9.0</td>
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<tr>
<td>2</td>
<td>Total Suspended Solids</td>
<td>IS: 3025 (Part 17): 1984, RA2017</td>
<td>24.5</td>
<td>mg/l</td>
<td>100.0</td>
</tr>
<tr>
<td>3</td>
<td>Oil &amp; Grease</td>
<td>IS 3025(P-38):1991 RA 1991</td>
<td>0.5</td>
<td>mg/l</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>BOD (3 days @ 27°C)</td>
<td>IS: 2025 (Part 44): 1993, RA: 2019</td>
<td>13.2</td>
<td>mg/l</td>
<td>30.0</td>
</tr>
<tr>
<td>5</td>
<td>COD</td>
<td>IS : 3025 (Part 58) : 2006 RA : 2017</td>
<td>38.7</td>
<td>mg/l</td>
<td>250.0</td>
</tr>
</tbody>
</table>

**End of Report**

(Checked By)

(Authorized Signatory)

www.vardan.co.in

Note: Terms & conditions refer on backside of test report.