



भारतीय प्रौद्योगिकी संस्थान भिलाई  
जी. ई. सी. कैंपस, सेजबहार, रायपुर - ४९२०१५  
छत्तीसगढ़, भारत

Indian Institute of Technology Bhilai  
GEC Campus, Sejbahar, Raipur - 492015  
Chhattisgarh, India

No: IITBhilai/Estate/118

Date: 05/05/2021

To,  
Deputy Director General of Forests (C),  
Ministry of Environment, Forest and Climate Change,  
Integrated Regional Office, Aranya Bhawan,  
North Block, Sector 19, Naya Raipur,  
Atal Nagar, Chhattisgarh- 492002.  
Email id: iro.raipur-mefcc@gov.in , iroraipur@gmail.com

**Sub: Submission of Six Monthly Environmental Compliance Report - Construction of Permanent Campus of IIT Bhilai project at Kutelabhata village, District Durg (C.G.)- Reg.**


Ref: SEIAA letter no SN 231/SEIAA CG/MIN/909, dated 13/05/2020 regarding Environmental Clearance issued to IIT Bhilai.

Sir,

IIT Bhilai has obtained Environmental Clearance (EC) from State Level Environment Impact Assessment Agency (SEIAA) vide reference cited above. With reference to the subject matter we hereby submit the six monthly environmental compliance report with this letter for the period of **October 2020 to March 2021.**

This is for your kind reference please.

Thanks & Regards

  
Engineer-In-charge  
IIT Bhilai

Enclosure: Six monthly compliance report.

Copy to:

1. Member Secretary, Paryavas Bhavan, North Block Sector-19, Atal Nagar Distt- Raipur (C.G.)
2. Regional Office, Chhattisgarh Environment Conservation Board, 5/32 Banglow Bhilai (C.G.)
3. Director, IIT Bhilai



## Six Monthly Environmental Compliance Report for Period of October 2020 to March 2021

**Project: Construction of Permanent Campus of IIT Bhilai at Kutelabhata Village, Distt. Durg , C.G.**


Environmental Clearance Letter No: SN 231/SEIAACG/MIN/909 Dated 13/05/2020

### I. Statutory Compliance



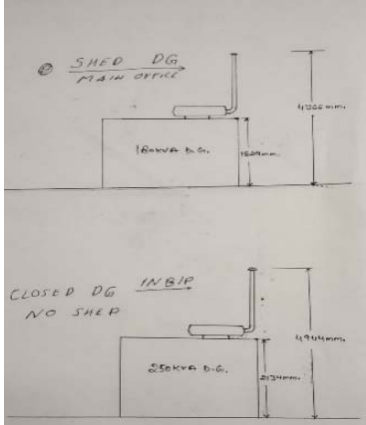
SN	Conditions	Compliance
i.	The project proponent shall obtain all necessary clearance / permission from all relevant agencies including Town and Country planning authority before commencement of work. All the construction shall be done in accordance with the local building byelaws.	IIT has obtained following clearance / permission: - a) NOC for Master Plan & Buildings from Town and Country Planning authority. b) Approval for Structural Safety of Buildings due to Earthquakes from IIT Roorkee. c) Provisional NOC obtained for Fire clearance of master plan and buildings. d) NOC for drawing surface water from Chhattisgarh Irrigation Department. e) NOC for tree cutting from Chhattisgarh Forest Department.
ii.	The approval of the Competent Authority shall be obtained for structural safety of buildings due to earthquakes, adequacy of firefighting equipment etc as per National Building Code including protection measures from lightening etc.	All the buildings of IIT Bhilai have been designed for resisting earthquake as per provisions of relevant Indian standard code and National Building Code (NBC) and those designs have been vetted by IIT Roorkee. To ensure the safety against firefighting provisions have been made as per NBC norms and IIT Bhilai has obtained provisional NOC from Chhattisgarh Home Guards.
iii.	The project proponent shall obtain Consent to Establish / Operate under the provision of Air(Prevention &control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concentrated state Pollution control Board /committee.	Consent to Establish/ Operate under the provision of Air & water (Prevention & control of Pollution) Act 1891 has been obtained from Chhattisgarh Environment conservation Board (CECB).
iv.	The project proponent shall obtain the necessary permission for drawl of ground water / surface water required for the project from the competent authority.	Approval for drawl of surface water has been obtained from Chhattisgarh Irrigation Department. As of now no ground water is being using by IIT Bhilai therefore approval for drawl of ground water was not obtained.

v.	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	Obtained.
vi.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department shall be obtained, as applicable, by project proponents from the respective competent authorities.	<p>No diesel is being stored inside the project premises rather daily consumable quantity of diesel being distributed to construction equipment's through diesel bowser.</p> 
vii.	The provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016, and the plastics Waste Management Rules, 2016, shall be followed.	<p>Provisions of the Solid Waste Management Rules, 2016, e-Waste (Management) Rules, 2016 are being applied at site. Separate bins have been put at site for collection of plastic waste.</p> 
viii.	The project proponent shall follow the ECBC/ECBC-R prescribed by Bureau of Energy Efficiency, Ministry of Power strictly. Use of Chillers shall be CFC and HCFC free.	Complied. ECBC (2007), NBC 2016 and National Electrical Code 2011 have been adopted as code of practice for design of electrical systems.

## II. Air Quality Monitoring and Preservation

SN	Conditions	Compliance
i.	Notification GSR 94(E) dated 25.01.2018 of MoEF&CC regarding Mandatory Implementation of Dust Mitigation Measures for Construction and Demolition Activities for projects requiring Environmental Clearance shall be complied with.	<p>Frequent spraying of water is in practiced to keep the soil erosion of upper layers under control.</p> 
ii.	A management plan shall be drawn up and implemented to contain the current exceedance in ambient air quality at the site.	Being done.
iii.	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5) covering upwind and downwind directions during the construction period.	Agency is appointed for monitoring ambient air quality periodically. Monitoring report attached in <b>Annexure-1</b> .
iv.	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should	DG sets are a source of backup power for equipment and for area lighting. They are enclosed to conform to the rules under EPA. Adequate



	<p>be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board. The diesel generator sets to be used during construction phase shall be low sulphur diesel type and shall confirm to environmental (Protection) prescribed for air and noise emission standards.</p>	<p>height of stack has been provided to DG sets for proper dispersion of emission during its operation.</p> 
v.	<p>The gaseous emissions from DG set shall be dispersed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution. Low sulphur diesel shall be used. The location of the DG set and exhaust pipe height shall be as per the provisions of the Central Pollution Control Board (CPCB) norms.</p>	<p>Adequate height of stack is provided to DG sets for proper dispersion of emissions during its operation. Acoustic enclosure has been provided for DG sets. The location of DG set and exhaust pipe height has been provided as per Central Pollution Control Board (CPCB) norms.</p> <div style="display: flex; justify-content: space-around;">   </div>
vi.	<p>Construction site shall be adequately barricaded before the construction begins. Dust, smoke &amp; other air pollution prevention measures shall be provided for the building as well as the site. These measures shall include</p>	<p>Barricades have been provided and shall be maintained around the construction site for entire period of construction. The vehicle which carries soil / construction material has been covered with impervious</p>

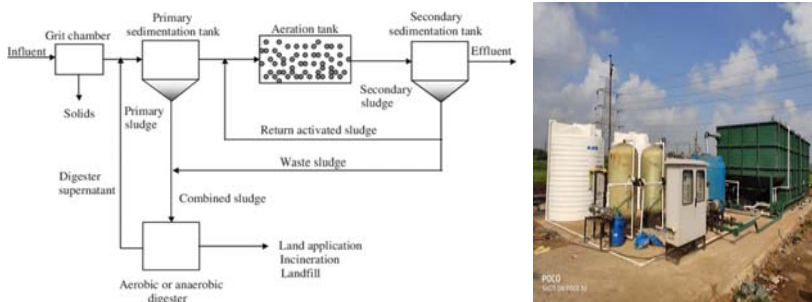
	screens for the building under construction, continuous dust/ wind breaking walls all around the site (at least 3-meter height). Plastic/tarpaulin sheet covers shall be provided for vehicles bringing in sand, cement, murram and other construction materials prone to causing dust pollution at the site as well as taking out debris from the site.	sheets in order to prevent it from spreading into the environment from the vehicle.
vii.	Sand, murram, loose soil, cement, stored on site shall be covered adequately so as to prevent dust pollution.	Construction material like sand, murram, loose soil, cement, stored at site are properly covered.
viii.	Unpaved surfaces and loose soil shall be adequately sprinkled with water to suppress dust.	To suppress dust , adequate sprinkling of water is in regular practice at site.
ix.	All construction and demolition debris shall be stored at the site (and not dumped on the roads or open spaces outside) before they are properly disposed. All demolition and construction waste shall be managed as per the provisions of the Construction and Demolition Waste Management Rules 2016.	Some of the solid inert waste has been reused and some of the waste has been disposed off to the concerned authority as per followed by the rule of Solid Waste Management Rule 2016 and Construction and Demolition waste Rules 2016.
x.	For indoor air quality the ventilation provisions as per National Building Code of India.	Suitable measures have been applied for ventilation as per National Building Code of India.

### **III. Water Quality Monitoring and Preservation**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	The natural drain system should be maintained for ensuring unrestricted flow of water. No construction shall be allowed to obstruct the natural drainage through the site, on wetland and water bodies. Check dams, bio-swales, landscape, and other sustainable urban drainage systems (SUDS) are allowed for maintaining the drainage pattern and to harvest rain water.	No such natural drains and its course of flow has been obstructed at site location.
ii.	Buildings shall be designed to follow the natural topography as much as possible. Minimum cutting and filling should be done.	From the conceptual stage, planning of buildings and services has been done in such a manner that natural topography remained undisturbed and ensured minimum cutting and filling of terrain.
iii.	Total Freshwater use shall not exceed the proposed requirement as provided in the project details.	Being ensured.


iv.	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the regional office, Ministry of environment, forest and Climate change, Nagpur along with six monthly Monitoring reports.	Being done.
v.	A certificate shall be obtained from the local body supplying water, specifying the total annual water availability with the local authority, the quantity of water already committed, the quantity of water allotted to the project under consideration and the balance water available. This should be specified separately for ground water and surface water sources, ensuring that there is no impact on other users.	An approval has been obtained from state irrigation department for supply of surface water (River Water). However no water is currently being used.
vi.	At least 20% of the open spaces as required by the local building bye-laws shall be pervious. Use of Grass pavers, paver blocks with at least 50% opening, landscape etc. would be considered as pervious surface.	Being ensured.
vii.	Installation of dual pipe plumbing for supplying fresh water for drinking, cooking and bathing etc. and other for supply of recycled water for flushing, landscape irrigation, car washing, thermal cooling, conditioning etc. shall be done.	All the buildings have been designed for dual pipe plumbing system to carry fresh water and recycled water separately.
viii.	Use of water saving devices/ fixtures (viz. low flow flushing systems; use of low flow faucets tap aerators etc.) for water conservation shall be incorporated in the building plan.	Being ensured.
ix.	Separation of grey and black water should be done by the use of dual plumbing system. In case of single stack system separate recirculation lines for flushing by giving dual plumbing system be done.	Separate Plumbing system adopted for grey and black water.
x.	Water demand during construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Being ensured.
xi.	The local bye-law provisions on rain water harvesting should be followed. If local bye-law provision is not available, adequate provision for storage and recharge should be followed as per the Ministry of Urban Development Model Building Byelaws, 2016. Rain water harvesting recharge pits/storage tanks shall be provided for ground water recharging as per the CGWB norms.	Provisions for rain water harvesting adopted for all campus building.

xii.	The ground water shall not be withdrawn without approval from the Competent Authority. Project proponent shall develop rain water-harvesting structures for 100% harvesting of rainwater in the premises for recharging the ground water table. Rainwater from open spaces shall be collected and reuse for landscaping and other purposes. Rooftop rainwater harvesting shall be adopted for the buildings & residential blocks to be constructed by individual building. Every building shall have rainwater-harvesting facilities. The storm water flowing in roadside drains shall also be recycled and reused to maintain the vegetation and discharged into natural water bodies. Before recharging the surface runoff pre-treatment must be done to remove suspended matter and oil & grease. Rainwater harvesting pits shall be constructed as per proposal.	At present no ground water is being drawn for any purpose. For Rain water from rooftop rain water harvesting system has been adopted. In open spaces and road side, rain water collected through storm water line will be used to recharge the natural water bodies.
xiii.	All recharge should be limited to shallow aquifer.	Being done.
xiv.	Water shall be sourced from after prior permission from CGWA and Water Resource Department. No ground water shall be used during construction phase of the project before prior permission from CGWA.	Being ensured.
xv.	Any ground water dewatering should be properly managed and shall conform to the approvals and the guidelines of the CGWA in the matter. Formal approval shall be taken from the CGWA for any ground water abstraction or dewatering.	Being done.
xvi.	The quantity of fresh water usage, water recycling and rainwater harvesting shall be measured and recorded to monitor the water balance as projected by the project proponent. The record shall be submitted to the Regional Office, Ministry of environment, and Climate Change, Nagpur along with six monthly Monitoring reports.	Will be done.

xvii.	<p>Sewage shall be treated in the STP with tertiary treatment. The treated effluent from STP shall be recycled/re-used for flushing. AC make up water and gardening Zero discharge condition shall be maintained. Project proponent shall install separate electric metering arrangement with time totalizer for the running of pollution control systems. The record (logbook) of power &amp; chemical consumption for running the pollution control systems shall be maintained.</p>	<p>Being ensured. A centralized STP of 900 KLD capacity is proposed for Main campus and the treated water will be reused for flushing/horticulture. During construction period local STP system has been installed at site for recycle of waste water. Image and schematic diagram of installed STP are shown below.</p>  <p>The schematic diagram illustrates the flow of wastewater through various stages of treatment. It begins with 'Influent' entering a 'Grit chamber', where 'Solids' are removed. The remaining liquid flows into a 'Primary sedimentation tank', which separates 'Primary sludge' from the 'Digester supernatant'. The 'Primary sludge' is sent to an 'Aerobic or anaerobic digester'. The 'Digester supernatant' is recycled back into the 'Primary sedimentation tank'. The effluent from the primary tank enters an 'Aeration tank', where 'Return activated sludge' is added. The 'Aeration tank' produces 'Waste sludge', which is sent to the 'Aerobic or anaerobic digester'. The treated effluent from the aeration tank enters a 'Secondary sedimentation tank', which separates 'Secondary sludge' from the 'Effluent'. The 'Secondary sludge' is recycled back into the 'Aeration tank'. The 'Effluent' is the final treated water. The 'Aerobic or anaerobic digester' produces 'Combined sludge', which is sent to 'Land application', 'Incineration', or 'Landfill'.</p> <p>The photograph shows the physical installation of the STP, featuring large white storage tanks, a green building, and various pipes and equipment.</p>
xviii.	<p>No sewage or untreated effluent water would be discharged through storm water drains.</p>	<p>Being ensured.</p>
xix.	<p>Onsite sewage treatment of capacity of treating 100% waste water to be installed. The installation of the Sewage Treatment Plant (STP) shall be certified by an independent expert and a report in this regard shall be submitted to the Ministry before the project is commissioned for operation. Treated waste water shall be reused on site for landscape, flushing, cooling tower, and other end-uses.</p>	<p>Being done.</p>
xx.	<p>Periodical monitoring of water quality of treated sewage shall be conducted. Necessary measures should be made to mitigate the odour problem from STP.</p>	<p>Periodical monitoring of water quality of treated sewage is being conducted. Monitoring report attached in <b>Annexure-2</b>.</p>
xxi.	<p>Sludge from the onsite sewage treatment, including septic tanks, shall be collected, conveyed and disposed as per the Ministry of Urban Development, Central Public Health and Environmental Engineering Organization (CPHEEO) Manual on Sewerage and Sewage Treatment Systems, 2013. The sludge generated from Sewerage Treatment Plant (after drying) shall be used as manure for gardening purpose.</p>	<p>Being done.</p>




#### **IV. Noise Monitoring and Prevention**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	Ambient noise levels shall conform to residential area/commercial area/industrial area/silence zone both during day and night as per Noise Pollution (Control and Regulation) Rules, 2000. Incremental pollution loads on the ambient air and noise quality shall be closely monitored during construction phase. Adequate measures shall be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB / SPCB.	Complied. Noise level survey has been conducted. Report attached herewith. Monitoring Report attached in <b>Annexure-3</b> .
ii.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Being ensured.
iii.	Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	<p>DG sets are enclosed to suppress the noise. Also the ear plugs are provided to the operator and other required working crew.</p> 


#### **IV. Energy Conservation measure**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	Compliance with the Energy Conservation Building Code (ECBC) of Bureau of Energy Efficiency shall be ensured. Buildings in the States which have notified their own ECBC, shall comply with the State ECBC.	The development of IIT Bhilai project is categorised as Large development project and project proponent has applied for GRIHA LD rating from GRIHA council. All mandatory clauses of ECBC 2007 are being complied in design of system and equipment. For achieving 5-star rating in GRIHA LD category. In the 12 <sup>th</sup> GRIHA summit, IIT Bhilai project was

		declared winner for the demonstration of energy management under GRIHA LD rating in exemplary performance award by GRIHA council.
ii.	LED lights shall be used in project premise.	<p>100% LED lights are considered in all buildings and campus area. Also during construction stage LED lights are being used for area lighting.</p> 
iii.	Concept of passive solar design that minimize energy consumption in buildings by using design elements, such as building orientation, landscaping, efficient building envelope, appropriate fenestration, increased day lighting design and thermal mass etc. shall be incorporated in the building design. Wall, window, and roof u-values shall be as per ECBC specifications.	Complied.
iv.	Energy conservation measures like installation of CFLs/ LED for the lighting the area outside the building should be integral part of the project design and should be in place before project commissioning.	100% LED lights are considered in all buildings and campus area.
v.	Solar, wind or other Renewable Energy shall be installed to meet electricity generation equivalent to 1% of the demand load or as per the state level/ local building bye-law's requirement, whichever is higher.	Provision for solar power generation system has been considered and will be implemented after project starts functioning.
vi.	Solar power shall be used for lighting in the apartment to reduce the power load on grid. Separate electric meter shall be installed for solar power. Solar water heating shall be provided to meet 20% of the hot water demand of the commercial and institutional building or as per the	Being done.

	requirement of the local building bye-laws, whichever is higher. Residential buildings are also recommended to meet its hot water demand from solar water heaters, as far as possible.	
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## **VI. Waste Management**


<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	A certificate from the competent authority handling municipal solid wastes, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project shall be obtained.	Will be obtained.
ii.	Disposal of muck during construction phase shall not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority	At present no muck is deposited during construction phase.
iii.	Separate wet and dry bins must be provided in each unit and at the ground level for facilitating segregation of waste. Solid waste shall be segregated into wet garbage and inert materials.	<p>The appropriate provisions are considered in the scope of project and would be implemented during campus functioning. Also during construction stage separate wet and dry bins has been provided at workmen habitat at each unit for facilitating segregation at source.</p> 

iv.	Organic waste compost/ Vermiculture pit/ Organic Waste Converter within the premises with a minimum capacity of 0.3 kg /person/day must be installed.	Instructed provision shall be made after commissioning of project. During present construction stage, food waste from canteen and workmen habitat is getting disposed daily through local municipality.
v.	All non-biodegradable waste shall be handed over to authorized recyclers for which a written tie up must be done with the authorized recyclers.	Non-biodegradable waste shall be handed over to authorized recyclers as per site-based Waste Management plan.
vi.	Any hazardous waste generated during construction phase, shall be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	Site based Waste management has been implemented.
vii.	Use of fly ash based bricks / blocks / tiles / products shall be ensured. Blended Cement with fly ash shall be used. The provisions of notification issued by Ministry of Environment. Forest and Climate Change, Government of India regarding use of fly ash must be complied with. Appropriate usage of other industrial wastes shall also be explored. Soil borrow area should be filled up with ash with proper compaction and covered with topsoil kept separately Fly ash /pond ash shall be used for low-lying areas filling. In embankments / road construction etc. ash shall be utilized as per guidelines of Ministry of Environment. Forest and Climate Change. Government of India / Central Pollution Control Board / Indian Road Congress etc. concerning authorities. The use of perforated brick / hollow blocks / fly ash based lightweight aerated concrete etc. shall also be ensured so as to reduce load on natural resources.	Fly ash based bricks, blocks, tiles and cement are using in construction.
viii.	Fly ash should be used as building material in the construction as per the provision of Fly Ash Notification of September, 1999 and amended as on 27 <sup>th</sup> August, 2003 and 25th January, 2016. Ready mixed concrete must be used in building construction.	Use of fly ash is ensured in project. Ready mixed concrete is in use for buildings and other construction works.
ix.	Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.	Being done.
x.	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.	Being done.

## **VII. Green Cover**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	No tree can be felled/transplant unless exigencies demand. Where necessary, tree felling shall be with prior permission from the concerned regulatory authority. Old trees should be retained based on girth and age regulations as may be prescribed by the Forest Department. Plantations to be ensured species (cut) to species (planted).	Being done. At the initial stage, trees creating obstruction were identified and formal approval was obtained from forest department and local administration for cutting of only those trees.
ii.	Green belt shall be developed in an area equal to 31% of the net planning area with a native tree species in accordance with CPCB guidelines The green belt shall inter alia cover the entire periphery of the constructed. As far as possible maximum area of open spaces shall be utilized for plantation purposes. A minimum of 1 tree for every 80 sqm of land should be planted and maintained. The existing trees will be counted for this purpose. The landscape planning should include plantation of native species. The species with heavy foliage, broad leaves and wide canopy cover are desirable. Water intensive and /or invasive species should not be used for landscaping.	Being done.
iii.	Where the trees need to be cut with prior permission from the concerned Authority compensatory plantation in the ratio of 110 1e planting of 10 wees for every 1 tree that is cut) shall be done and maintained. Plantations to be ensued species cut) to species planted Area for green bet development shall be provided as per the details provided in the project document.	Will be done.

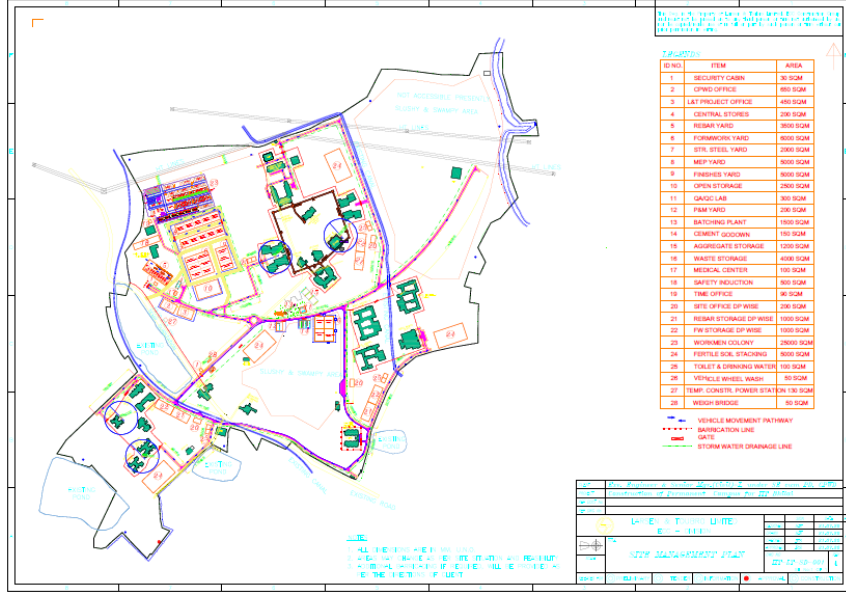


iv.	Topsoil should be stripped up to a certain depth from the areas proposed to buildings, roads, paved areas and external services. It should be stockpiled appropriately in designated areas and reapplied during plantation of the proposed vegetation on site.	<p>The topsoil stripped off and stocked at site and same shall be reapplied during land scaping work site.</p> 
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### **VIII. Transport**

SN	Conditions	Compliance
i.	<p>A comprehensive mobility plan, as per MoUD best practices guidelines (URDPFI), shall be prepared to include motorized, non-motorized, public, and private networks. Road should be designed with due consideration for environment, and safety of users. The road system can be designed with these basic criteria.</p> <ol style="list-style-type: none"> <li>Hierarchy of roads with proper segregation of vehicular and pedestrian traffic.</li> <li>Traffic calming measures.</li> <li>Proper design of entry and exit points.</li> <li>Parking norms as per local regulation.</li> </ol>	<p>Road system for IIT Bhilai project is designed considering IRC guidelines. Design measures included dedicated passage for movement of vehicles, bicycle and pedestrians with proper design of entry and exit points. Design also considered the parking spaces and road signage for safe movement. Also during construction stage, site based logistic plan is prepared and displayed at various location.</p>

		
ii.	<p>Vehicles hired for bringing construction material to the site should be in good condition and should have a pollution check certificate and should conform to applicable air and noise emission standards be operated only during nonpeak hours.</p>	<p>Complied. System of vehicle fitness checking is implemented.</p> 

iii.	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 km radius of the project is maintained and improved upon after the implementation of the project. This plan should be based of cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D/ competent authority for road augmentation and shall also have the consent to the implementation of components of the plan which involve the participation of these departments.	During construction stage a site wide traffic management plan was prepared and implemented. Formal approval for traffic management plan shall be obtained from competent authority for road augmentation.
		 <p>The map illustrates the site layout with various zones and facilities. A detailed legend on the right lists 28 items with their respective areas in square meters (SQM). The legend includes items such as: 1. DETENTION CANAL (16 SQM), 2. OPENED OFFICE (160 SQM), 3. L&amp;T PROJECT OFFICE (400 SQM), 4. CENTRAL STORES (200 SQM), 5. REPAIR YARD (1600 SQM), 6. FORMWORK YARD (1600 SQM), 7. STEEL YARD (2000 SQM), 8. MEET YARD (1600 SQM), 9. FENCED YARD (1600 SQM), 10. OPENED STORAGE (2000 SQM), 11. GRAVEL LAB (300 SQM), 12. PAVEMENT YARD (200 SQM), 13. BATHING PLANT (1000 SQM), 14. CONCRETE YARD (100 SQM), 15. AGGREGATE STORAGE (1000 SQM), 16. WASTE STORAGE (4000 SQM), 17. MEDICAL CENTER (100 SQM), 18. SAFETY PRODUCTION (1600 SQM), 19. TIME OFFICE (40 SQM), 20. SITE OFFICE OFF WARE (200 SQM), 21. REPAIR STORAGE OFF WARE (1000 SQM), 22. FPM STORAGE OFF WARE (1000 SQM), 23. WORKMEN COLONY (2000 SQM), 24. PORTABLE SOIL STACKING (1600 SQM), 25. TOILET &amp; DRAINAGE WATER (100 SQM), 26. VEHICLE WASH WASH (100 SQM), 27. TEMP. CONTROL POWER STATION (100 SQM), 28. WEIGH BRIDGE (10 SQM).</p> <p>Legend symbols include: VEHICLE MOVEMENT PATHWAY (dashed line), BARRICADE LINE (dotted line), GATE (solid line), and STORM WATER DRAINAGE LINE (solid line).</p> <p>Map title: SITE TRAFFIC MANAGEMENT PLAN. Date: 2023-10-10. Scale: 1:1000.</p>
iv.	The Project proponent shall use covered leak proof trucks/dumpers vehicles for transportation of construction material and C&D wastes.	Complied.

## XI. Human Health Issues

SN	Conditions	Compliance
i.	All workers working at the construction site and involved in loading, unloading, carriage of construction material and construction debris or working in any area with dust pollution shall be provided with dust mask	Complied. All workmen were issued dust mask to use at site.
ii.	For indoor air quality the ventilation provisions as per National Building Code of India. Emergency preparedness plan based on the Hazard	Complied. Site based Emergency preparedness and Disaster management plans are implemented at site.

	identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented	
iii.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project. Occupational health surveillance of the workers shall be done on a regular basis.	Complied. Workmen habitat is provided within at site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, etc. The housing of construction workers is in the form of temporary structures and shall be removed after the completion of the project. Occupational health surveillance of the workers is being done on a regular basis.
iv.	A First Aid Room shall be provided in the project both during construction and operations of the project	Complied. First Aid Room is provided near Time Office at site.

#### **X. Corporate Environment Responsibility**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	The project proponent shall comply with the provisions of the Ministry of Environment Forest and Climate Change New Delhi OM vide F No 22-65/2017-1A. II dated 15 May 2018 as applicable. regarding Corporate Environment Responsibility.	IIT Bhilai is an institution of national importance established under the Institutes of Technology Act, 1961 and The Institutes of Technology (Amendment) Act, 2016 . IIT Bhilai is operated through the grant-in-aid from the Government of India through the Ministry of Human Resource and Development. Further IIT Bhilai is not a profit making organization and is exempted from the Income Tax. IIT Bhilai as such does not fall under the purview of The Companies Act, 2013 or any other Act. Therefore, mention clause is not applicable to IIT Bhilai.
ii.	The company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements / deviation / violator of the environmental / forest wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the Ministry of Environment Forest and Climate Change, New Delhi / SEI AA, Chhattisgarh as a part of six-monthly report.	
iii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.	

iv.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	
v.	Self-environmental audit shall be conducted annually. Every three years' third party environmental audit shall be carried out.	
vi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the plants (if any) shall be implemented.	

#### **XI. Miscellaneous:**

<b>SN</b>	<b>Conditions</b>	<b>Compliance</b>
i.	Local persons shall be given employment during development and operation of the site.	Local persons employed during construction period and more than 50% local labour working at site.
ii.	The project proponent shall make public the environmental clearance granted for the project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website Permanently.	Complied.
iii.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	Complied
iv.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of	Will be done.



	monitored data on their website and update the same on half-yearly basis.	
v.	The project proponent shall monitor the criteria pollutants level namely: PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> . (ambient levels as well as stack emissions) or critical sectoral parameters (if any) of any indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.	The criteria pollutants level namely: PM <sub>10</sub> , SO <sub>2</sub> , NO <sub>2</sub> . (ambient levels as well as stack emissions) are monitoring on a quarterly basis. The environmental parameters are displayed near site for public view.
vi.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	Will be done.
vii.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	Will be done.
viii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	IIT Bhilai ensured to adhere to the stipulations made by the State Pollution Control Board and the State Government.
ix.	The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and commitment made during their presentation to the Expert Appraisal Committee.	Being abided.
x.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC) New Delhi /SEIAA, Chhattisgarh.	Being followed.
xi.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Being noted.
xii.	SEIAA, Chhattisgarh may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.	Being noted.

xiii.	SFIAA Chhattisgarh reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Being followed.
xiv.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Being followed.
xv.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Being followed.
xvi.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Being noted.
xvii.	Environmental clearance will be valid as per the provision of EIA notification,2006 (as Amended).	Being noted.

Annexure-1

Air Quality-Monitoring Report



HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

Name & Address Of The Customer		REPORT NO.	UES/TR/20-21/0515	
To, <b>L &amp; T Construction</b> <b>Bhilai(C.G.)</b>		LAB REF NO.	UES/20-21/AAQM/073-076	
		DATE OF SAMPLING	27/10/2020-28/10/2020	
		DATE OF RECEIPT	29/10/2020	
		DATE OF REPORT	06/11/2020	
		DATE OF ANALYSIS	START: 29/10/2020	END:05/11/2020
<b>SAMPLE DETAILS</b>				
Monitoring For	Ambient Air Quality Monitoring			
Sampling Location	1. Near DP-01 Area			
	2. Near DP-02 Area			
	3. Near DP-03 Area			
	4. Near Workman Camp			
Customer Ref. No. & Date	EL136WOD0000138			
Duration Of Sampling	As per CPCB norms			
Sample Collected By	Laboratory Chemist			
Sampling Procedure	As Per Method Reference			
Sample Quantity/Packing	Filter Paper (PM10): 1X1 No., Filter Paper (PM2.5): 1X1 No. SO2: 30mLX1 No. PVC Bottle, NO2: 30mLX1 No. PVC BOTTLE, Rubber Bladder: 1X1 No., C6H6: CARCOAL Tube. OZONE: 10MLX1 No. Brown PVC Bottle, NH4:10MLX1 No. Brown PVC Bottle			
Project Name	Raipur_R&M_2019_2020			

### TEST REPORT

Parameter	Unit	NAAQM Standard	METHOD REFERENCE	Results			
				Near DP-01 Area	Near DP-02 Area	Near DP-03 Area	Near Workman Camp
Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	IS 5182(Part 23):2006 & CPCB Guidelines Vol.-I	94.6	84.0	92.2	88.6
Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	CPCB Guidelines Vol.-I	44.8	38.4	42.2	40.0
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 2):2001, RA 2006 &CPCB Guidelines Vol.-I	06	08	12	10
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 6): 2006 & CPCB Guidelines Vol.-I	20	18	22	24
Carbon Monoxide(CO)	mg/m <sup>3</sup>	4.0	IS 5182(Part 10):1999, RA 2003	1.2	1.1	1.0	1.4
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	CPCB Guidelines Vol-I	28	32	30	26
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	CPCB Guidelines Vol-I	28.4	26.2	24.8	22.6
Arsenic (As)	ng/m <sup>3</sup>	6.0	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	ng/m <sup>3</sup>	20	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	µg/m <sup>3</sup>	1.0	CPCB Guidelines Vol-I and AAS Method	0.08	0.04	0.06	0.04
Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	IS 5182 (Part 11):2006	N.D.	N.D.	N.D.	N.D.
Benzo (a) Pyrene	ng/m <sup>3</sup>	1.0	IS 5182 (Part 12):2014	N.D.	N.D.	N.D.	N.D.

Note: N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

#### Terms & conditions

- > The use of the report for publication, arbitration or as legal dispute is forbidden.
- > Test sample will be retained for 15 days after issue of test report, unless otherwise agreed with customer.
- > This is for information as the party has asked for above test.

 <b>PREPARED BY</b> 06/11/2020		For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b> 06/11/2020
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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai(C.G.)</b>		<b>REPORT NO.</b>		UES/TR/20-21/04145	
		<b>LAB REF NO.</b>		UES/20-21/AAQM/03833	
		<b>DATE OF SAMPLING</b>		03/02/2021-04/02/2021	
		<b>DATE OF RECEIPT</b>		04/02/2021	
		<b>DATE OF REPORT</b>		10/02/2021	
		<b>DATE OF ANALYSIS</b>		START: 05/02/2021	END:09/02/2021
<b>SAMPLE DETAILS</b>					
<b>Monitoring For</b>		<b>Ambient Air Quality Monitoring</b>			
<b>Sampling Location</b>		1. Near DP-01 Area			
		2. Near DP-02 Area			
		3. Near DP-03 Area			
		4. Near main office			
<b>Customer Ref. No. &amp; Date</b>		EL136WOD0000138			
<b>Duration Of Sampling</b>		As per CPCB norms			
<b>Sample Collected By</b>		Laboratory Chemist			
<b>Sampling Procedure</b>		As Per Method Reference			
<b>Sample Quantity/Packing</b>		Filter Paper (PM10): 1X1 No., Filter Paper (PM2.5): 1X1 No. SO2: 30mlX1 No. PVC Bottle, NO2: 30mlX1 No. PVC BOTTLE, Rubber Bladder: 1X1 No., C6H6: CARCOAL Tube. OZONE: 10MLX1 No. Brown PVC Bottle, NH4:10MLX1 No. Brown PVC Bottle			
<b>Project Name</b>		Raipur_R&M_2019_2020			

TEST REPORT							
Parameter	Unit	NAAQM Standard	METHOD REFERENCE	Results			
				Near DP-01 Area	Near DP-02 Area	Near DP-03 Area	Near main office
Particulate Matter size less than 10 microns (PM <sub>10</sub> )	µg/m <sup>3</sup>	100	IS 5182(Part 23):2006 & CPCB Guidelines Vol.-I	92.4	80.4	86.4	78.2
Particulate Matter size less than 2.5 microns (PM <sub>2.5</sub> )	µg/m <sup>3</sup>	60	CPCB Guidelines Vol.-I	40.4	32.8	46.4	30.6
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 2):2001, RA 2006 &CPCB Guidelines Vol.-I	12	08	10	06
Nitrogen Dioxide (NO <sub>2</sub> )	µg/m <sup>3</sup>	80	IS 5182(Part 6): 2006 & CPCB Guidelines Vol.-I	18	20	24	22
Carbon Monoxide (CO)	mg/m <sup>3</sup>	4.0	IS 5182(Part 10):1999, RA 2003	0.6	1.0	1.1	0.8
Ozone (O <sub>3</sub> )	µg/m <sup>3</sup>	180	CPCB Guidelines Vol-I	32	28	36	30
Ammonia (NH <sub>3</sub> )	µg/m <sup>3</sup>	400	CPCB Guidelines Vol-I	22.4	20.8	26.4	21.8
Arsenic (As)	ng/m <sup>3</sup>	6.0	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Nickel (Ni)	ng/m <sup>3</sup>	20	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Lead (Pb)	µg/m <sup>3</sup>	1.0	CPCB Guidelines Vol-I and AAS Method	N.D.	N.D.	N.D.	N.D.
Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m <sup>3</sup>	5.0	IS 5182 (Part 11):2006	N.D.	N.D.	N.D.	N.D.
Benzo(a) Pyrene	ng/m <sup>3</sup>	1.0	IS 5182 (Part 12):2014	N.D.	N.D.	N.D.	N.D.

Note: N.D.: Not Detected.

REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

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- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test(s) only.

PREPARED BY



For ULTIMATE ENVIROLYTICAL SOLUTIONS

AUTHORIZED SIGNATORY

-----End of the test report-----

AN ISO : 9001:2015 / ISO: 14001:2015 / ISO 45001:2018 CERTIFIED LABORATORY



## Annexure-2

### STP Water Quality - Monitoring Report



HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>		REPORT NO	UES/TR/20-21/0513	
		LAB REF NO	UES/20-21/W/0560	
		DATE OF SAMPLING	27/10/2020	
		DATE OF RECEIPT	28/10/2020	
		DATE OF REPORT	06/11/2020	
		DATE OF ANALYSIS	START: 29/10/2020	END: 05/11/2020
<b>SAMPLE DETAILS</b>				
CUSTOMER SAMPLE ID	STP OUTLET WATER	CUSTOMER REF. NO. & DATE	EL136WOD0000138	
SAMPLE TYPE	EFFLUENT WATER	SAMPLE CONDITION AT RECEIPT	OK	
PACKING OF SAMPLE	PLASTIC BOTTLE (2 LTR.) GLASS BOTTLE (1 LTR.)	SAMPLE COLLECTED BY	CUSTOMER	
OTHERS DETAILS	SEALED	QUANTITY RECEIVED	APPROX 3 LTR.	

### TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	STANDARD LIMIT	RESULT
1	pH Value at 25.2°C	-	IS:3025: (Part-11)	5.5 To 9.0	7.19
2	Total Suspended Solid	mg/L	IS 3025 (part-17)	100	29.0
3	Chemical Oxygen Demand	mg/L	IS 3025: (Part-58)	250	40.0
4	Bio-Chemical Oxygen Demand at 27°C for 3 days	mg/L	IS 3025: (Part-44)	30	10.5
5	Oil & Grease	mg/L	IS 3025 (part-39)	10	N.D.

Note: mg/lit.:milligram per liter.

**REMARKS: RESULTS ARE AS ABOVE**

#### Terms & conditions

- The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only

 PREPARED BY		For ULTIMATE ENVIROLYTICAL SOLUTIONS  AUTHORIZED SIGNATORY
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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>		<b>REPORT NO</b>		UES/TR/20-21/04150	
		<b>LAB REF NO</b>		UES/20-21/W/03838	
		<b>DATE OF SAMPLING</b>		03/02/2021	
		<b>DATE OF RECEIPT</b>		05/02/2021	
		<b>DATE OF REPORT</b>		10/02/2021	
		<b>DATE OF ANALYSIS</b>		START:06/02/2021	END: 09/02/2021
<b>SAMPLE DETAILS</b>					
<b>CUSTOMER SAMPLE ID</b>	STP OUTLET WATER	<b>CUSTOMER REF. NO. &amp; DATE</b>		EL136WOD0000138	
<b>SAMPLE TYPE</b>	EFFLUENT WATER	<b>SAMPLE CONDITION AT RECEIPT</b>		OK	
<b>PACKING OF SAMPLE</b>	PLASTIC BOTTLE (2 LTR.) GLASS BOTTLE (1 LTR.)	<b>SAMPLE COLLECTED BY</b>		CUSTOMER	
<b>OTHERS DETAILS</b>	SEALED	<b>QUANTITY RECEIVED</b>		APPROX 3 LTR.	

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	STANDARD LIMIT	RESULT
1	pH Value at 25.2°C	-	IS:3025: (Part-11)	5.5 To 9.0	7.26
2	Total Suspended Solid	mg/L	IS 3025 (part-17)	100	22.0
3	Chemical Oxygen Demand	mg/L	IS 3025: (Part-58)	250	44.0
4	Bio-Chemical Oxygen Demand at 27°C for 3 days	mg/L	IS 3025: (Part-44)	30	12.6
5	Oil & Grease	mg/L	IS 3025 (part-39)	10	N.D.

Note: mg/lit.: milligram per liter.

**REMARKS: RESULTS ARE AS ABOVE**

### Terms & conditions

- The above analysis report refers to the particular sample received at our end and the use of the report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only

 <b>PREPARED BY</b>	 <b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b>	 <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----

Annexure-3

Noise Level - Monitoring Report





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

Recognized by Ministry of Environment Forest and Climate Change under EP act 1986

<b>Name &amp; Address Of The Customer</b> <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>		REPORT NO.	UES/TR/20-21/02079
		LAB REF NO.	UES/20-21/N/02627
		DATE OF REPORT	06/11/2020
		DATE OF SAMPLING	27/10/2020
<b>SAMPLE DETAILS</b>			
Monitoring For	Noise Level Monitoring		
Customer Ref. No. & Date	EL136WOD0000138		
Sampling Location	1. Near DP-01 Area		
	2. Near DP-02 Area		
	3. Near DP-03 Area		
	4. Near Workman Camp		
Sample Collected By	Laboratory Chemist		
Sampling Procedure	Manufacturer's Instruction		

REPORT NO. 02079

## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
1. Near DP-01 Area	06:00 to 07:00	64.5	38.8	89.8	22:00 to 23:00	64.0	46.8	83.3
	07:00 to 08:00	68.6	42.0	80.1	23:00 to 00:00	65.6	45.3	82.9
	08:00 to 09:00	69.0	45.3	97.2	00:00 to 01:00	63.2	42.8	80.6
	09:00 to 10:00	72.2	53.4	100.4	01:00 to 02:00	60.9	41.3	80.7
	10:00 to 11:00	69.4	64.3	98.2	02:00 to 03:00	61.7	40.8	80.4
	11:00 to 12:00	70.5	65.9	99.1	03:00 to 04:00	60.0	47.5	80.8
	12:00 to 13:00	65.9	50.4	97.4	04:00 to 05:00	63.6	38.6	81.3
	13:00 to 14:00	70.6	46.8	90.8	05:00 to 06:00	65.2	39.0	84.0
	14:00 to 15:00	74.2	47.9	99.6	--	--	--	--
	15:00 to 16:00	72.0	54.3	94.0	--	--	--	--
	16:00 to 17:00	73.3	56.4	95.0	--	--	--	--
	17:00 to 18:00	71.8	60.6	99.8	--	--	--	--
	18:00 to 19:00	70.3	55.4	99.6	--	--	--	--
	19:00 to 20:00	68.4	48.0	88.2	--	--	--	--
	20:00 to 21:00	66.9	50.8	88.0	--	--	--	--
	21:00 to 22:00	66.3	45.5	87.3	--	--	--	--
	--				Limits in dB(A) Leq as per <b>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</b>			
	Day Leq	69.62			75			
	Night Leq	63.05			70			



REPORT NO. 02079

## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
2. Near DP-02 Area	06:00 to 07:00	63.4	36.6	90.7	22:00 to 23:00	63.0	45.6	80.3
	07:00 to 08:00	67.5	41.2	81.6	23:00 to 00:00	64.5	45.0	81.7
	08:00 to 09:00	68.2	41.0	96.2	00:00 to 01:00	63.2	43.9	80.3
	09:00 to 10:00	71.1	50.2	101.3	01:00 to 02:00	61.5	42.3	80.4
	10:00 to 11:00	68.3	62.3	94.3	02:00 to 03:00	60.6	40.8	80.6
	11:00 to 12:00	71.4	61.5	99.0	03:00 to 04:00	63.0	46.6	80.9
	12:00 to 13:00	64.7	47.3	96.2	04:00 to 05:00	64.5	37.5	81.3
	13:00 to 14:00	72.5	44.6	91.6	05:00 to 06:00	64.2	38.0	84.5
	14:00 to 15:00	73.3	45.8	98.6	--	--	--	--
	15:00 to 16:00	72.0	54.2	92.3	--	--	--	--
	16:00 to 17:00	73.3	55.3	93.0	--	--	--	--
	17:00 to 18:00	70.6	60.5	96.3	--	--	--	--
	18:00 to 19:00	69.2	51.3	94.3	--	--	--	--
	19:00 to 20:00	67.3	48.2	86.0	--	--	--	--
	20:00 to 21:00	65.4	49.6	88.0	--	--	--	--
	21:00 to 22:00	65.3	45.4	86.2	--	--	--	--
	--				Limits in dB(A) Leq as per <b>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</b>			
	Day Leq	68.97			75			
	Night Leq	63.06			70			



REPORT NO. 02079

## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
3. Near DP-03 Area	06:00 to 07:00	65.5	39.8	91.8	22:00 to 23:00	64.0	44.2	84.3
	07:00 to 08:00	68.7	40.0	80.1	23:00 to 00:00	66.6	45.0	81.6
	08:00 to 09:00	68.0	44.3	99.2	00:00 to 01:00	61.0	41.3	80.6
	09:00 to 10:00	73.2	55.4	101.6	01:00 to 02:00	60.2	46.3	82.6
	10:00 to 11:00	68.5	66.3	96.2	02:00 to 03:00	63.1	44.8	83.4
	11:00 to 12:00	72.4	65.4	94.0	03:00 to 04:00	64.2	45.5	82.8
	12:00 to 13:00	66.8	51.4	96.4	04:00 to 05:00	65.6	36.6	83.3
	13:00 to 14:00	73.5	46.6	91.8	05:00 to 06:00	65.0	37.0	80.0
	14:00 to 15:00	75.1	48.9	97.5	--	--	--	--
	15:00 to 16:00	73.0	54.1	93.1	--	--	--	--
	16:00 to 17:00	74.5	55.4	91.0	--	--	--	--
	17:00 to 18:00	72.6	60.4	98.3	--	--	--	--
	18:00 to 19:00	73.2	51.4	94.6	--	--	--	--
	19:00 to 20:00	69.5	48.3	84.0	--	--	--	--
	20:00 to 21:00	67.7	53.8	87.5	--	--	--	--
	21:00 to 22:00	69.5	47.5	86.3	--	--	--	--
	--				Limits in dB(A) Leq as per <b><u>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</u></b>			
	Day Leq	70.73			75			
	Night Leq	63.71			70			



REPORT NO. 02079



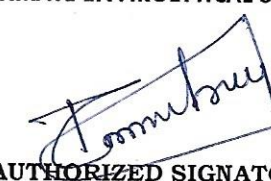
## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
4. Near Workman Camp	06:00 to 07:00	60.2	35.3	89.8	22:00 to 23:00	63.0	43.8	80.2
	07:00 to 08:00	66.4	39.2	80.1	23:00 to 00:00	61.3	42.1	78.7
	08:00 to 09:00	65.0	41.4	97.2	00:00 to 01:00	59.0	40.6	77.6
	09:00 to 10:00	68.4	50.1	100.4	01:00 to 02:00	57.5	38.2	81.7
	10:00 to 11:00	66.2	60.2	98.2	02:00 to 03:00	58.4	37.6	80.2
	11:00 to 12:00	67.5	60.9	99.1	03:00 to 04:00	52.0	44.5	79.6
	12:00 to 13:00	63.9	46.4	97.4	04:00 to 05:00	61.4	36.6	80.3
	13:00 to 14:00	68.6	45.6	90.8	05:00 to 06:00	62.0	35.0	82.0
	14:00 to 15:00	70.2	42.6	99.6	--	--	--	--
	15:00 to 16:00	69.3	54.3	94.0	--	--	--	--
	16:00 to 17:00	70.6	54.1	95.0	--	--	--	--
	17:00 to 18:00	67.6	59.4	99.8	--	--	--	--
	18:00 to 19:00	68.2	52.2	99.6	--	--	--	--
	19:00 to 20:00	66.3	44.1	88.2	--	--	--	--
	20:00 to 21:00	61.4	48.6	88.0	--	--	--	--
	21:00 to 22:00	64.2	44.2	87.3	--	--	--	--
	--				Limits in dB(A) Leq as per <b>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</b>			
	Day Leq	66.5			75			
	Night Leq	59.33			70			

REMARKS: RESULTS ARE AS ABOVE

### Terms & conditions

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- This is for information as the party has asked for above test(s) only.

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-----End of the test report-----





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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Name & Address Of The Customer		REPORT NO.	UES/TR/20-21/04151
To, <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>		LAB REF NO.	UES/20-21/N/03839
		DATE OF REPORT	10/02/2021
		DATE OF SAMPLING	03/02/2021 to 04/02/2021
<b>SAMPLE DETAILS</b>			
Monitoring For	Noise Level Monitoring		
Customer Ref. No. & Date	EL136WOD0000138		
Sampling Location	1. Near DP-01 Area		
	2. Near DP-02 Area		
	3. Near DP-03 Area		
	4. Near Workman Camp		
Sample Collected By	Laboratory Chemist		
Sampling Procedure	Manufacturer's Instruction		

REPORT NO. 04151

## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
1. Near DP-01 Area	06:00 to 07:00	74.5	38.8	88.8	22:00 to 23:00	54.0	36.8	86.3
	07:00 to 08:00	78.6	32.0	86.1	23:00 to 00:00	55.6	35.3	88.9
	08:00 to 09:00	79.0	35.3	92.2	00:00 to 01:00	53.2	32.8	82.6
	09:00 to 10:00	72.2	43.4	104.4	01:00 to 02:00	50.9	31.3	86.7
	10:00 to 11:00	79.4	54.3	96.2	02:00 to 03:00	51.7	30.8	84.4
	11:00 to 12:00	70.5	55.9	92.1	03:00 to 04:00	50.0	57.5	82.8
	12:00 to 13:00	85.9	64.4	98.4	04:00 to 05:00	63.6	48.6	86.3
	13:00 to 14:00	78.6	66.8	94.8	05:00 to 06:00	65.2	39.0	88.0
	14:00 to 15:00	74.2	67.9	92.6	--	--	--	--
	15:00 to 16:00	72.0	54.3	96.0	--	--	--	--
	16:00 to 17:00	73.3	46.4	94.0	--	--	--	--
	17:00 to 18:00	61.8	50.6	92.8	--	--	--	--
	18:00 to 19:00	80.3	45.4	95.6	--	--	--	--
	19:00 to 20:00	68.4	58.0	86.2	--	--	--	--
	20:00 to 21:00	76.9	50.8	84.0	--	--	--	--
	21:00 to 22:00	56.3	45.5	87.3	--	--	--	--
	--				Limits in dB(A) Leq as per <b>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</b>			
	Day Leq	68.65			75			
	NightLeq	56.05			70			



REPORT NO. 04151

**TEST REPORT**

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
2. Near DP-02 Area	06:00 to 07:00	73.4	36.6	90.7	22:00 to 23:00	63.0	35.6	86.3
	07:00 to 08:00	77.5	41.2	81.6	23:00 to 00:00	54.5	35.0	83.7
	08:00 to 09:00	78.2	41.0	96.2	00:00 to 01:00	53.2	33.9	82.3
	09:00 to 10:00	81.1	50.2	101.3	01:00 to 02:00	51.5	42.3	88.4
	10:00 to 11:00	78.3	62.3	94.3	02:00 to 03:00	50.6	30.8	82.6
	11:00 to 12:00	81.4	61.5	99.0	03:00 to 04:00	53.0	46.6	85.9
	12:00 to 13:00	84.7	47.3	96.2	04:00 to 05:00	54.5	37.5	85.3
	13:00 to 14:00	82.5	44.6	91.6	05:00 to 06:00	54.2	38.0	86.5
	14:00 to 15:00	83.3	45.8	98.6	--	--	--	--
	15:00 to 16:00	82.0	54.2	92.3	--	--	--	--
	16:00 to 17:00	73.3	55.3	93.0	--	--	--	--
	17:00 to 18:00	80.6	60.5	96.3	--	--	--	--
	18:00 to 19:00	89.2	51.3	94.3	--	--	--	--
	19:00 to 20:00	77.3	48.2	86.0	--	--	--	--
	20:00 to 21:00	75.4	49.6	88.0	--	--	--	--
	21:00 to 22:00	65.3	45.4	86.2	--	--	--	--
	--				Limits in dB(A) Leq as per <b>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</b>			
	DayLeq	64.17			75			
	NightLeq	43.06			70			

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REPORT NO. 04151

**TEST REPORT**

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
3. Near DP-03 Area	06:00 to 07:00	62.5	39.8	90.8	22:00 to 23:00	54.0	34.2	80.3
	07:00 to 08:00	66.7	44.0	86.1	23:00 to 00:00	56.6	35.0	78.6
	08:00 to 09:00	62.0	44.3	92.2	00:00 to 01:00	51.0	31.3	72.6
	09:00 to 10:00	72.2	56.4	102.6	01:00 to 02:00	50.2	46.3	72.6
	10:00 to 11:00	62.5	66.3	98.2	02:00 to 03:00	53.1	34.8	73.4
	11:00 to 12:00	70.4	62.4	90.0	03:00 to 04:00	54.2	35.5	72.8
	12:00 to 13:00	64.8	50.4	96.4	04:00 to 05:00	55.6	35.6	73.3
	13:00 to 14:00	76.5	48.6	94.8	05:00 to 06:00	55.0	32.0	70.0
	14:00 to 15:00	72.1	42.9	92.5	--	--	--	--
	15:00 to 16:00	70.0	55.1	98.1	--	--	--	--
	16:00 to 17:00	64.5	56.4	92.0	--	--	--	--
	17:00 to 18:00	72.6	60.4	92.3	--	--	--	--
	18:00 to 19:00	72.2	54.4	94.6	--	--	--	--
	19:00 to 20:00	68.5	48.3	84.0	--	--	--	--
	20:00 to 21:00	67.7	53.8	87.5	--	--	--	--
	21:00 to 22:00	69.5	47.5	86.3	--	--	--	--
	--				Limits in dB(A) Leq as per <b><u>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</u></b>			
	Day Leq	<b>58.73</b>			<b>75</b>			
	Night Leq	<b>46.71</b>			<b>70</b>			





HDD-272, Phase III - Near JP Chowk  
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REPORT NO. 04151

## TEST REPORT

LOCATION	NOISE LEVEL READING IN dB(A)							
	TIME (Hrs)	DAY dB(A)			TIME (Hrs)	NIGHT dB(A)		
		Leq	Lmin	Lmax		Leq	Lmin	Lmax
4. Near Main Office	06:00 to 07:00	50.2	36.3	82.8	22:00 to 23:00	53.0	43.8	86.2
	07:00 to 08:00	56.4	32.2	86.1	23:00 to 00:00	51.3	42.1	72.7
	08:00 to 09:00	55.0	40.4	92.2	00:00 to 01:00	59.0	40.6	78.6
	09:00 to 10:00	58.4	48.1	105.4	01:00 to 02:00	57.5	38.2	82.7
	10:00 to 11:00	56.2	52.2	92.2	02:00 to 03:00	48.4	37.6	85.2
	11:00 to 12:00	67.5	62.9	92.1	03:00 to 04:00	42.0	44.5	70.6
	12:00 to 13:00	53.9	45.4	96.4	04:00 to 05:00	51.4	36.6	84.3
	13:00 to 14:00	58.6	42.6	98.8	05:00 to 06:00	52.0	35.0	86.0
	14:00 to 15:00	60.2	46.6	90.6	--	--	--	--
	15:00 to 16:00	59.3	52.3	92.0	--	--	--	--
	16:00 to 17:00	60.6	58.1	95.0	--	--	--	--
	17:00 to 18:00	57.6	55.4	96.8	--	--	--	--
	18:00 to 19:00	58.2	50.2	94.6	--	--	--	--
	19:00 to 20:00	56.3	42.1	82.2	--	--	--	--
	20:00 to 21:00	51.4	46.6	82.0	--	--	--	--
	21:00 to 22:00	54.2	42.2	82.3	--	--	--	--
	--				Limits in dB(A) Leq as per <u>The Noise Pollution (Regulation &amp; Control) Rules, 2000 (see rule 3(1) and 4(1) Ambient Air Quality in respect of Noise</u>			
	DayLeq	51.24			75			
	NightLeq	42.40			70			

REMARKS: RESULTS ARE AS ABOVE

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- > This is for information as the party has asked for above test(s) only.

 PREPARED BY	 For ULTIMATE ENVIROLYTICAL SOLUTIONS	 AUTHORIZED SIGNATORY
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-----End of the test report-----

Annexure-4

Water Quality- Monitoring Report





HDD-272, Phase III - Near JP Chowk  
Ring Road No.-2, Kabir Nagar, Raipur (C.G.) - 492099  
Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	Report No	UES/TR/20-21/0509	
	Lab Ref No	UES/20-21/W/0556	
	Date of Sampling	27/10/2020	
	Date of Receipt	28/10/2020	
	Date of Report	06/11/2020	
	Date of analysis	START:29/10/2020	END: 05/11/2020
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	Labour Camp		
Customer Ref. No. & Date	EL136WOD0000138		
Sample Type	Water		
Packing of Sample	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	Ok		

REPORT NO.0509

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Physical Parameters					
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.87
B.	Chemical Parameters					
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.66
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	314.0
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	188.8
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	150.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	164.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	5.6
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	5.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	0.62
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	43.2
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	10.2
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.16





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REPORT NO.0509

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

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 06/11/2020 PREPARED BY		For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  06/11/2020 AUTHORIZED SIGNATORY
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	Report No	UES/TR/20-21/0510	
	Lab Ref No	UES/20-21/W/0557	
	Date of Sampling	27/10/2020	
	Date of Receipt	28/10/2020	
	Date of Report	06/11/2020	
	Date of analysis	START:29/10/2020	END: 05/11/2020
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	Water tank (outside agency of Junaid Khan)		
Customer Ref. No. & Date	EL136WOD0000138		
Sample Type	Water		
Packing of Sample	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	Ok		

REPORT NO.0510

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Physical Parameters					
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.45
B.	Chemical Parameters					
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.49
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	828.3
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	495.5
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	166.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	185.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	20.6
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	112.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	12.1
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	54.0
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	13.12
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.17





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REPORT NO.0510

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	FaecalColiform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.:milligram per liter, N.D.: Not Detected.

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- > Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- > This is for information as the party has asked for above test.

 <b>PREPARED BY</b> 06/11/2020		For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b> 06/11/2020
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-----End of the test report-----



**Ultimate**  
ENVIROLYTICAL SOLUTIONS

HDD-272, Phase III - Near JP Chowk  
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Ph : 0771 - 4027777 | Email : ultimatenviro@gmail.com

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REPORT NO.0511

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.:milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

### Terms & conditions

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- > This is for information as the party has asked for above test.

 <b>PREPARED BY</b> 06/11/2020		For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>AUTHORIZED SIGNATORY</b> 06/11/2020
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	Report No	UES/TR/20-21/0512	
	Lab Ref No	UES/20-21/W/0559	
	Date of Sampling	27/10/2020	
	Date of Receipt	28/10/2020	
	Date of Report	06/11/2020	
	Date of analysis	START:29/10/2020	END: 05/11/2020
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	DP - 1 Area		
Customer Ref. No. & Date	EL136WOD0000138		
Sample Type	Water		
Packing of Sample	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	Ok		

REPORT NO.0512

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Physical Parameters					
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	1.47
B.	Chemical Parameters					
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.82
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	542.8
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	323.5
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	164.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	190.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	26.1
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	33.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	2.4
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	42.4
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	10.30
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.18





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REPORT NO.0512

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019.			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

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- > This is for information as the party has asked for above test(s) only.

 <b>PREPARED BY</b> 06/11/2020		For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>AUTHORIZED SIGNATORY</b> 06/11/2020
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	<b>Report No</b>	UES/TR/20-21/04146	
	<b>Lab Ref No</b>	UES/20-21/W/03834	
	<b>Date of Sampling</b>	03/02/2021-04/02/2021	
	<b>Date of Receipt</b>	04/02/2021	
	<b>Date of Report</b>	10/02/2021	
	<b>Date of analysis</b>	START: 05/02/2021	END: 09/02/2021
<b>SAMPLE DETAILS</b>			
<b>Customer Sample Id /Sampling Location</b>	Labour Camp		
<b>Customer Ref. No. &amp; Date</b>	EL136WOD0000138		
<b>Sample Type</b>	Water tank		
<b>Packing of Sample</b>	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
<b>Sample Collected By</b>	Laboratory Chemist		
<b>Sample Condition At Receipt</b>	Ok		

REPORT NO.04146

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A. Physical Parameters						
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.68
B. Chemical Parameters						
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.22
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	366.0
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	221.0
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	126.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	152.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	7.8
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	5.2
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	0.64
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0 NO RELAXATION	N.D. 0.04
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200 NO RELAXATION	38.4 0.04
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (part-46)	30	100 NO RELAXATION	16.4 0.04
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.3	N.D.	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	N.D.	5 NO RELAXATION	15 0.04
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.11



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REPORT NO.04146

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	FaecalColiform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

REMARKS: RESULTS ARE AS ABOVE

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 <b>PREPARED BY</b>	 <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>	For ULTIMATE ENVIROLYTICAL SOLUTIONS  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	Report No	UES/TR/20-21/04147	
	Lab Ref No	UES/20-21/W/03835	
	Date of Sampling	03/02/2021	
	Date of Receipt	04/02/2021	
	Date of Report	10/02/2021	
	Date of analysis	START: 05/02/2021	END: 09/02/2021
	<b>SAMPLE DETAILS</b>		
Customer Sample Id /Sampling Location	Water tank DP- 3		
Customer Ref. No. & Date	EL136WOD0000138		
Sample Type	Water tank		
Packing of Sample	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	Ok		

REPORT NO.04147

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A.	Physical Parameters					
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.28
B.	Chemical Parameters					
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.24
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	862.0
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	522.0
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	178.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	196.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	26.2
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	89.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	16.1
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	52.0
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	10.2
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.08





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REPORT NO.04147

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

**REMARKS: RESULTS ARE AS ABOVE**

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 <b>PREPARED BY</b>	 <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>	<b>For ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b>
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-----End of the test report-----





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<b>Name &amp; Address Of The Customer</b>  <b>To,</b> <b>L &amp; T Construction</b> <b>Bhilai (C.G.)</b>	<b>Report No</b>	UES/TR/20-21/04148	
	<b>Lab Ref No</b>	UES/20-21/W/03836	
	<b>Date of Sampling</b>	03/02/2021	
	<b>Date of Receipt</b>	05/02/2021	
	<b>Date of Report</b>	10/02/2021	
	<b>Date of analysis</b>	START:06/02/2021	END: 09/02/2021
	<b>SAMPLE DETAILS</b>		
<b>Customer Sample Id /Sampling Location</b>	DP - 2 Area		
<b>Customer Ref. No. &amp; Date</b>	EL136WOD0000138		
<b>Sample Type</b>	Water tank		
<b>Packing of Sample</b>	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
<b>Sample Collected By</b>	Laboratory Chemist		
<b>Sample Condition At Receipt</b>	Ok		

REPORT NO.04148

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A. Physical Parameters						
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.28
B. Chemical Parameters						
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.46
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	428.0
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	260.0
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	128.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	148.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	12.6
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	28.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	0.28
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	32.0
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	12.1
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.04



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REPORT NO.04148

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

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 <b>PREPARED BY</b>		For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  <b>AUTHORIZED SIGNATORY</b>
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End of the test report





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Name & Address Of The Customer <b>To, L &amp; T Construction Bhilai (C.G.)</b>	Report No	UES/TR/20-21/04149	
	Lab Ref No	UES/20-21/W/03837	
	Date of Sampling	03/02/2021	
	Date of Receipt	05/02/2021	
	Date of Report	10/02/2021	
	Date of analysis	START:06/02/2021	END: 09/02/2021
<b>SAMPLE DETAILS</b>			
Customer Sample Id /Sampling Location	DP - 1 Area		
Customer Ref. No. & Date	EL136WOD0000138		
Sample Type	Water tank		
Packing of Sample	Plastic Bottle (5ltr.) Glass Bottle (350 ml)		
Sample Collected By	Laboratory Chemist		
Sample Condition At Receipt	Ok		

REPORT NO.04149

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
A. Physical Parameters						
1	Colour	Hazen	IS:3025 (Part-04)	5	15	<1
2	Odour	-	IS:3025 (part-05)	Agreeable	Agreeable	Agreeable
3	Turbidity	NTU	IS:3025 (Part-10)	1	5	0.68
B. Chemical Parameters						
1	pH Value at 25.2°C	-	IS:3025 (Part-11)	6.5-8.5	No Relaxation	7.64
2	Conductivity	µS/Cm	IS:3025 (Part-14)	-	-	568.0
3	Total Dissolved Solids	mg/L	IS:3025 (Part-16)	500	2000	344.0
4	Total Alkalinity (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-23)	200	600	144.0
5	Total Hardness (as CaCO <sub>3</sub> )	mg/L	IS:3025 (Part-21)	200	600	162.0
6	Sulphate (as SO <sub>4</sub> )	mg/L	IS:3025 (Part-24)	200	400	28.6
7	Chloride (as Cl)	mg/L	IS:3025 (Part-32)	250	1000	36.9
8	Ammonical Nitrogen as NH <sub>3</sub> -N	mg/L	IS:3025 (Part 34)	-	-	N.D.
9	Nitrate (as NO <sub>3</sub> )	mg/L	IS:3025 (part-34)	45	No Relaxation	2.2
10	Boron (as B)	mg/L	IS:3025 (Part-57)	0.5	1.0	N.D.
11	Calcium (as Ca)	mg/L	IS:3025 (Part-40)	75	200	46.8
12	Copper (as Cu)	mg/L	IS:3025 (part-42)	0.05	1.5	N.D.
13	Magnesium (as Mg)	mg/L	IS:3025 (Part-46)	30	100	12.6
14	Manganese (as Mn)	mg/L	IS:3025 (part-59)	0.1	0.3	N.D.
15	Zinc (as Zn)	mg/L	IS:3025 (part-49)	5	15	N.D.
16	Fluoride (as F)	mg/L	IS:3025 (part-60)	1.0	1.5	0.14



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REPORT NO.04149

## TEST REPORT

SR. NO.	PARAMETER	UNIT	METHOD OF TEST	AS PER IS 10500:2012		RESULT
				Requirement (Acceptable Limit)	Permissible Limit in the Absence of Alternate Source	
F.	Microbial Parameters					
1	Total Coliform	MPN/100ml	IS:1622:1981:RA:2019	Shall not be detectable in any 100 ml Sample		Absent
2	E. Coli	MPN/100ml	IS:1622:1981:RA:2019			Absent
3	Faecal Coliform	MPN/100ml	IS:1622:1981:RA:2019			Absent

Note: mg/lit.: milligram per liter, N.D.: Not Detected.

### REMARKS: RESULTS ARE AS ABOVE

#### Terms & conditions

- The use of the report for publication, arbitration or as legal dispute is forbidden.
- Test sample will be retained for 15 days after issue of test report unless otherwise agreed with customer.
- This is for information as the party has asked for above test(s) only.

 PREPARED BY		For <b>ULTIMATE ENVIROLYTICAL SOLUTIONS</b>  10/02/2021 AUTHORIZED SIGNATORY
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-----End of the test report-----