

# KARNATAKA INDUSTRIAL AREAS DEVELOPMENT BOARD

(A Government of Karnataka Undertaking)

# 49, 4th & 5th Floors, 'East Wing', Khanija Bhavan, Race Course Road, Bengaluru - 560 001

Phone : 080-22265383 Fax : 080-22267901

Website : www.kiadb.in email: ceoemkiadb@gmail.com

No.KIADB/JDTP/FCN:20456/5693/2021-22

Date: 13/08/2021

To,

**The Ministry of Environment, Forest & Climate Change (MoEF&CC)**

Regional Office (Southern Zone), Kendriya Sadan,

4th floor, F-Wing, 17th main road, II block,

Koramangala, Bengaluru- 560 034.

Respected Sir/ Madam,

**Subject:** Submission of Half yearly point wise Environmental Compliance report for all the conditions stipulated in the Environmental Clearance issued with respect to Harohalli Phase II & III Industrial Area, KIADB at Harohalli village, Kanakapura taluk, Ramanagara district, Karnataka to an extent of 904.86 hectares.

- Ref.:**
1. ToR issued by MoEF & CC vide letter No. 21-142/2015-IA.III dated 1<sup>st</sup> February, 2016.
  2. Environmental Public Hearing held on 23<sup>rd</sup> December 2016.
  3. Environmental Clearance reference no.: F.No. 21-142/2015-IA.III dated 21<sup>st</sup> September, 2017.
  4. General Condition imposed in the Environmental Clearance for submission of Half yearly Compliance @ Condition No. 3.

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With reference to above subject, it is to be informed that MoEF&CC has issued Environmental Clearance for Establishment of Harohalli Phase II & III Industrial Area, KIADB at Harohalli village, Kanakapura taluk, Ramanagara district, Karnataka to an extent of 904.86 hectares, after finalizing the ToR granted vide letter vide letter No. 21-142/2015-IA.III dated 1<sup>st</sup> February, 2016 and after conducting the public hearing on 23<sup>rd</sup> December 2016.

In the said Environmental Clearance at the General Condition No. 3, it is stipulated that KIADB has to submit half yearly compliance report to all the conditions stipulated in the EC issued on 21<sup>st</sup> September, 2017.

Hence, the detailed point wise compliance report to all the conditions stipulated in the Environmental Clearance issued to Harohalli Phase II & III Industrial Area is being submitted to MoEF&CC and the same is attached for your kind perusal and for information.

Kindly acknowledge the same.

Yours faithfully,

  
Chief Engineer-1  
KIADB, Bengaluru

**Half Yearly Environmental Compliance Report for all the Conditions Stipulated in the Environmental Clearance issued with respect to Establishment of Harohalli Phase II & III Industrial Area at Harohalli village, Kanakapura taluk, Ramanagara district, Karnataka.**

**For**

**KARNATAKA INDUSTRIAL AREAS DEVELOPMENT BOARD (KIADB)**

#49, 4th & 5th Floors, 'East Wing', Khanija Bhavan, Race Course Road, Bengaluru – 560001.

**Submission to**

**The APCCF, Regional office,  
Ministry of Environment, Forest and Climate Change (MoEF&CC)**

Kendriya Sadan, IV Floor, E & F wings, 17th Main Road, Koramangala II Block, Bangalore- 560 034.

**Prepared by**

**ROBUST MATERIALS TECHNOLOGY PRIVATE LIMITED**

(A MoEF&CC, DSIR-Recognized | FSSAI, ISO 45001:2018-Certified | NABL-Accredited | Drugs Control Department- Approved Company.)

Plot No.94, Thirumala Complex, 2nd Floor, NGEF Layout, Nagarabhavi Main Road, Bengaluru - 560 072.

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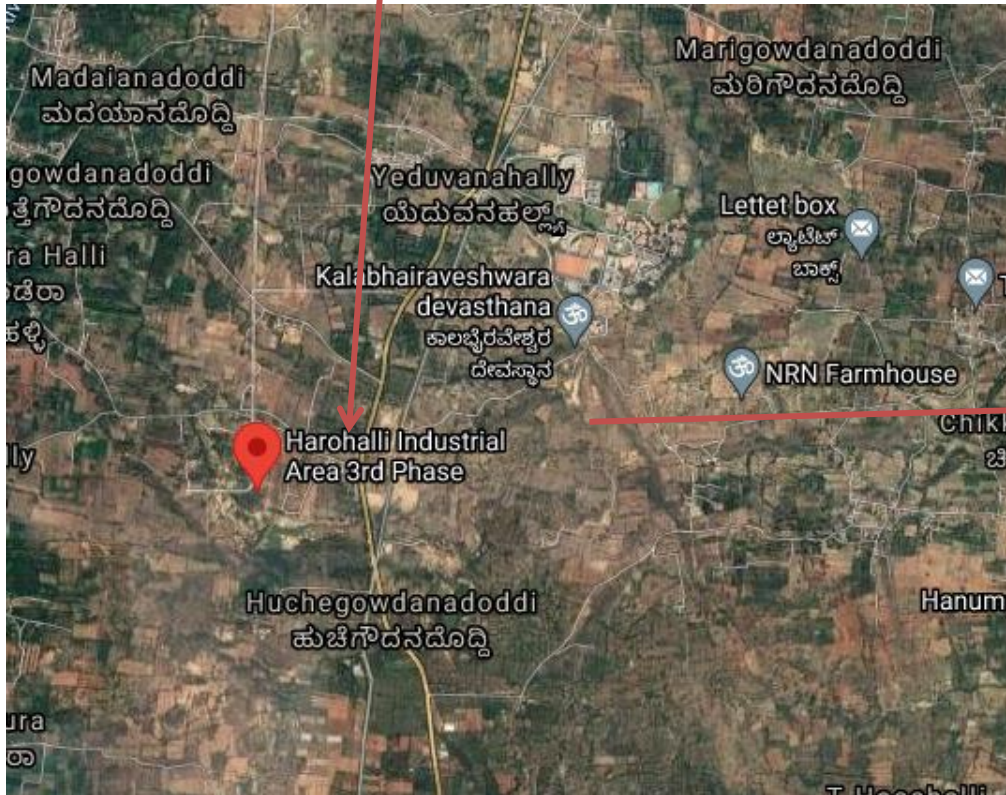
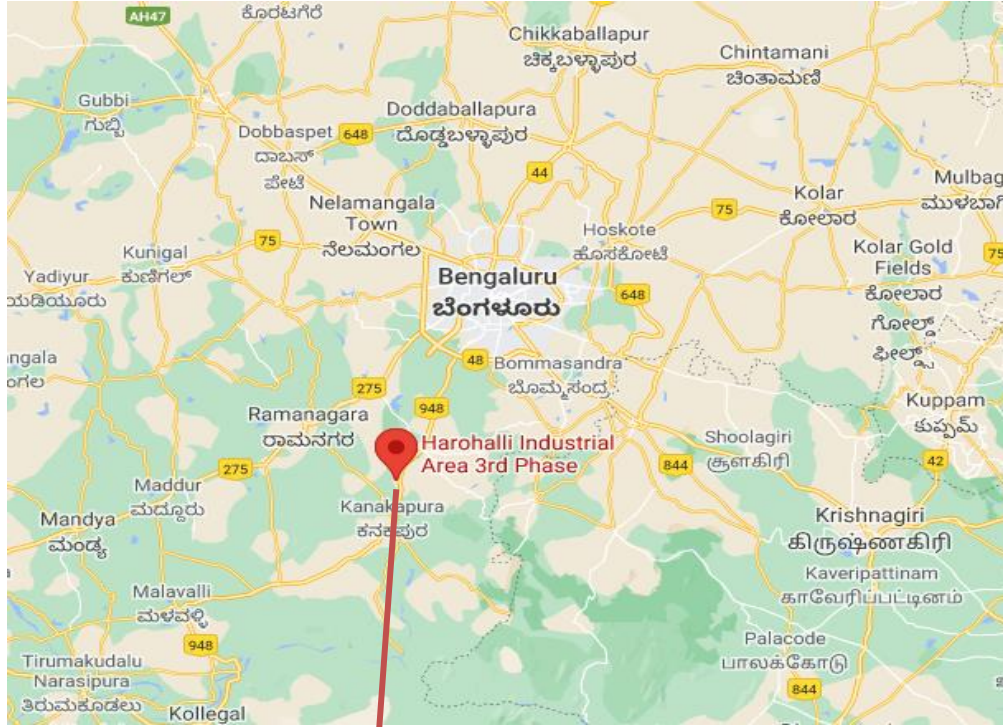


## **1.0. PROJECT DETAILS:**

- 1) Name of the Project:** Development of Harohalli Phase II & III Industrial Area at Harohalli village, Kanakapura taluk, Ramanagara district, Karnataka.
- 2) Environmental Clearance reference no.:** F.No. 21-142/2015-IA.III dated 21st September, 2017.
- 3) Total Plot Area:** 904.86 ha (Phase II - 371.92 ha and Phase III - 532.94 ha).
- 4) ToR issued:** Issued by MoEF & CC vide letter No. 21-142/2015-IA.III dated 1st February, 2016.
- 5) Public Hearing:** Public hearing was conducted on 23rd December 2016.
- 6) Category of Industries:** Red, Orange and Green category.
- 7) Total Water requirement for the Industrial area:** 11,360 KLD which will be sourced through Vrishabhavati treatment plant and Cauvery River water from BWSSB.
- 8) Total Wastewater generation:** 5,282 KLD.
- 9) Total Power requirement:** 8000 kW will be sourced from BESCOM.
- 10) Project Cost:** 1,561 crores.
- 11) Schedule & Category:** 7 (C) & A category
- 12) Address of the Correspondence:**

Chief Development Officer & Chief Engineer,  
Karnataka Industrial Areas Development Board (KIADB),  
#49, 4<sup>th</sup> & 5<sup>th</sup> floors,  
Khanija Bhavan, Race Course road,  
Bengaluru- 560 001.

## 2.0. LOCATION MAP:



Harohalli Phase II & III Industrial Area.

**Fig.1:** Map showing Harohalli Phase II & III Industrial Area.

**3.0. Half Yearly Environmental Compliance Report for all the Conditions Stipulated in the Environmental Clearance issued with respect to Establishment of Harohalli Phase II & III Industrial Area at Harohalli village, Kanakapurataluk, Ramanagara district, Karnataka. (Ext- 904.86 ha (Phase II - 371.92 ha & Phase III - 532.94 ha)).**

Sl. No.	CONDITIONS STIPULATED IN THE EC	COMPLIANCE STATUS
<b>A</b>	<b>SPECIFIC CONDITIONS:</b>	
<b>I</b>	<b>Construction Phase:</b>	
1	Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	Noted. Consent for Establishment from Karnataka State Pollution Control Board under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, has been obtained on 19 <sup>th</sup> March 2018. Copy has been submitted to MoEF&CC, Regional Office, Bangalore.
2	To achieve the Zero Liquid Discharge, waste water generated from different industrial operations should be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.	Noted. Individual industries will be informed to install in-house STP/ ETP to treat the wastewater generated within the industry and advised to adapt Zero Liquid discharge technology wherever possible/ applicable for efficient treatment of wastewater, so that the treated water conform to the norms and standards prescribed by KSPCB/CPCB and also so that there is zero discharge of effluent from the industry & 100% reuse of the treated water.
3	Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.	Noted. Necessary information will be given to individual industries for obtaining authorization by individual industries once the industries start the operation and they will be advised to strictly follow the rules and regulations made under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 & Solid Waste Management Rules, 2016. Necessary directions will be issued for segregation and collection of Hazardous wastes in safe and secured manner and will be disposed to authorized disposers/ recyclers /vendors etc. for ensuring safe disposal.

4	During construction phase, air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.	Complied- Competent persons from KIADB & Construction workers available at the Project site were advised to take necessary precautions and measures to reduce the noise and air emissions, during construction phase and necessary measures will be undertaken to keep the emission within the norms. Necessary steps will be taken to dispose the solid waste to authorized vendors for recycling and safe disposal. Construction wastes were disposed as per the guidelines stipulated in the Construction and Demolition Waste Management Rules, 2016.
5	This environmental clearance is only for the said Industrial Area. Any other activity within the Industrial Area would require separate environmental clearance, as applicable under EIA Notification, 2006 as amended from time to time. For all the individual units, environmental clearances, as applicable, shall be obtained from the respective regulatory authorities.	Noted. Individual industries will be advised to obtain necessary Environmental Clearance from the Competent Authority, as applicable under EIA notification, 2006, based on the manufacturing activity proposed by individual industries. A condition will also be imposed in the agreement of Lease/ Sale deed to obtain EC as applicable. No permission/ approval will be issued for the industries to operate without the prior approval from the Competent Authority.
6	There shall be a continuous green belt along the plant premises, except at the designated entry and exit points.	Noted and Complied as suggested. Avenue plantation of tree species wherever possible and green belt development in allotted area and buffer zones are done.
7	Green belt shall be developed using only native tree and shrub species. No exotic species to be used for green belt development. Project proponent is advised to take help of Botanical Survey of India for developing green belt development plan.	Agreed. Required buffer area has been provided from the village boundary and water bodies for green belt development. Green belt is developed with the local tree and shrub species. No exotic species will be introduced in the area. Also individual industrial units are also encouraged to maintain required green belt area of 33% of the allotted plot area as applicable.
8	Project proponent should implement Action Plan based on suggestions and assurances given during public hearing in toto.	Noted.
9	Develop ground water rejuvenation plan for the region from competent agency and provide appropriate financial mechanism to implement the same. This is over and above of Rs. 5.5 Crore, which has been assured for CSR activities.	Noted.



10	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 concerned Regional Office, MoEF&CC along with six monthly Monitoring reports.	Noted. Individual industries will be informed to maintain for recording water consumption and wastewater generation by respective industries, once the industries start operation in the proposed area.
11	Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.	Noted.
12	All the recommendations of the EMP shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan shall be submitted to RO, MoEF&CC along with half yearly compliance report.	Noted. The recommendations made in the Environmental Management Plan and applicable mitigation measures are adapted wherever possible and mitigation plans so adapted shall be included in the half yearly Compliance report and shall be submitted to the Regional Office of MoEF&CC, Bangalore.
13	The member units shall provide storage tanks for storage of effluent for monitoring the characteristics of effluent and to treat the same to meet the prescribed inlet norms before taking into the CETP for further treatment.	Noted. Industries are informed to obtain necessary approval from KSPCB and adhere to the terms and conditions mentioned in the said consent. Storage tanks of sufficient capacity are provided to store the effluent generated from the industrial process. A direction will be issued to individual industries to have an agreement between the CETP facility and individual industry for scientific disposal of wastewater. The industry that does not have in-house ETP facility is advised to carryout pre-treatment of wastewater generated and neutralize the same with acid/alkali and then discharge this wastewater for further treatment in CETP facility. The treated water shall meet the prescribed norms and the test reports of characteristics of raw effluent water and treated water will be submitted to competent authority.
14	Proper meters with recording facilities shall be provided to monitor the effluent quality and quantity from member industries to CETP and from CETP to re-use on a continuous basis.	Noted. Industries which are operated in the respective industrial area are informed to provide water meter for all the water sources and maintain logbooks for water flow meters for recording quantity of water consumption and wastewater generation and they are informed to reuse the treated water on daily basis.

15	The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.	Noted and Environmental Cell has been created with qualified Engineer to review the environmental monitoring data and suggest for improvements.
16	Internal Road widths within the industrial estate shall be minimum 18 m ROW.	Noted and complied as per the local zoning regulation.
17	Common facilities such as repair shops, rest rooms for drivers and attendants shall be provided.	Noted and Basic facilities will be provided for all the workers and employees involved during construction phase of the proposed industrial area.
18	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.	Complied. All necessary infrastructure facilities and basic sanitary facilities were provided to the workers in the site during the construction phase of the industrial area.
19	Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.	Noted. All necessary steps will be taken to ensure that there is no contamination of soil and ground water during construction activities. Once the industries are made operational Red Category industries will be directed to carryout regular monitoring of Environmental attributes to observe the changes if any.
20	Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.	Noted. All the construction debris generated during the construction phase will be used for filling up of low lying area. However, all the construction and hazardous waste generated during the operation phase of industries will be directed to store in safe and secure manner and disposed carefully, to prevent the contamination of the ground water.
21	Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.	Agreed. Required area as per the norms for Parking space to accommodate trucks, cars, two wheelers and bicycles will be provided.
22	Any hazardous waste generated during development/ construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.	Agreed. Necessary approvals from the competent authority will obtained for the safe disposal of generated hazardous waste as per the applicable rules and regulations.

23	The diesel generator sets to be used during development/ construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	Noted. DG sets used during construction was of low sulphur diesel type and the air and noise emissions were within the prescribed norms, so that there was no disturbance created due to use of DG sets. DG sets with acoustic enclosures were used to comply with the norms.
24	The diesel required for operating DG sets shall be stored In underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.	Necessary actions were taken to store diesel in safe and secure manner, so that there are no accidents or harm to the environment. Individual industries in the notified site will be advised to take necessary steps and they will be advised to obtain clearances from competent authority for the safe storage of diesel.
25	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 and should be operated only during non-peak hours.	Complied-hired Vehicles will be ensured that they will be kept in good condition and emission documents were maintained by the vehicle owner which conforms to the prescribed standards and the workers were advised to use the vehicles during the non-peak hours as per the guidelines of Honourable High court of Karnataka in WP. No. 1958/2011 (LB-RES-PIL) on 04.12.2012 for different activities involved in construction work.
26	Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.	Complied- Competent persons from KIADB & Construction workers available at the Project site were advised to take necessary precautions and measures to reduce the noise and air emission levels, contributed during construction and adequate measures were taken to keep the emission within the norms.
27	Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27th August, 2003.	Noted and complied. As far as possible Fly ash should be used as building material during the construction phase. The individual Industrial units will be directed to strictly follow the provisions of Fly ash notification and use the fly ash products for building and construction purposes.
28	Ready mixed concrete must be used in site development and building construction.	Noted.

29	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Noted.
30	Water demand during development/ construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.	Noted.
31	Permission to draw ground water, if any, shall be obtained from the competent Authority prior to construction/ operation of the project.	Noted. Individual industries will be informed to obtain necessary permission from competent authority for digging new bore well if required and no ground water will be drawn without permission from the Central/ State Ground Water Authority.
32	Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.	Noted and complied. Industries will be informed to reduce the water consumption & wastewater generation, by installing latest technologies for efficient and limited use of water wherever possible. Industries will also be directed to conserve the water resource by adapting the same.
33	Regular supervision of the above and other measures for monitoring should be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.	Complied. Regular supervision will be done to ensure that there is no disturbance to the surroundings during the construction phase.
34	The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit, and action taken shall be submitted to the Ministry.	Noted. The suggestions/observations and concerns made during the public hearing will be duly considered and all relevant measures are being taken to improve the socio-economic conditions of the project and surrounding area.
35	For Corporate Social Responsibility activities, 2% of the project cost shall be earmarked. The CSR funds shall be allocated for vocational training programme, development of infrastructure like construction of public toilets etc.	Noted. Steps with respect to CSR/CER responsibilities are being taken. Allotted funds are being used for the development of infrastructure. Awareness programmes, training programmes, distributions of saplings for planting in forest areas are being done as part of CSR/ CER responsibilities.



36	All member industries shall be instructed to comply with the consent conditions given by PCB/MoEF&CC strictly to maintain ambient air quality within the stipulated standards of CPCB.	Industrial units were advised to follow the prevalent rules and regulations of all regulatory authorities while allotting the plots to the industries, before starting any type of construction activities and comply to those rules. They are informed to obtain consent from the concerned authorities such as CPCB/ KSPCB and comply to the prescribed norms and standards of the competent authority.
37	Existing State/Central Government norms shall be followed for providing employment, preference will be given to local educated and unemployed people based on their educational qualification. Vocational training shall be conducted to improve the skills of local people so that they can get employment/ self-employment.	Noted. Industries are also advised to do the same as per the prevalent norms of State/Central Government.
38	Compensation will be paid as per the land acquisition act of State.	Noted and Complied.
39	Corporate Environment Responsibility:	
	a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.	Noted. Individual Industrial units in the project area will be informed the same. All norms, standards and policies laid down by the competent authority will be strictly followed by the industrial units.
	b) The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/ deviation/ violation of the environmental or forest norms/ conditions.	Noted. Industrial units in the project area will be informed the same. Standard Operating Procedures will be laid down to keep the track, if there is any kind of deviations, non-compliances.
	c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.	Noted. Industrial units in the project area have been informed the same. Hierarchical system will be followed to all the concerned authorities when required.
	d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.	Noted. Individual Industrial units at the time of operation in the project area will be informed to have well laid down system of reporting of non-compliances/ violations of environmental norms.

II	Operation Phase:	
1	To achieve the Zero Liquid Discharge, waste water generated from different industrial operations should be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.	Noted. Individual industries will be informed to install in-house STP/ ETP to treat the wastewater generated within the industry. The industries are also advised to adapt Zero Liquid discharge technology wherever possible/ applicable for efficient treatment of wastewater, so that the treated water conform to the norms and standards prescribed by KSPCB/CPCB and also so that there is zero discharge of effluent from the industry & 100% reuse of the treated water.
2	All the topsoil excavated during development/ construction activities should be stored for use in horticulture/landscape development within the project site.	Complied. The topsoil excavated will be used for landscaping, levelling and plantation purposes in the project site.
3	Disposal of muck during development/ construction phase should 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.	Noted. The construction debris is reused/ recycled for backfilling and for construction of roads and when necessary the debris is disposed in safe and secure manner as per the Construction and Demolition rules 2016.
4	The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.	Noted. During the construction phase, all the solid wastes generated from construction activity will be collected systematically in a safe and secured manner and will be disposed to authorized vendors/ disposers. Industries are informed to follow the guidelines issued by KSPCB/ CPCB or the local authority.
5	The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Noted. Stack height for DG sets are provided as per CPCB/ KSPCB norms.
6	Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.	Noted. Each industry will be informed to maintain the noise levels as per the CPCB/KSPCB norms.

7	The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.	Complied. It is proposed to develop 15 m green belt all along the boundary of the industrial area. During the construction and development of the industrial area, plantation will be undertaken in a phased manner. Green belt is developed with the local tree and shrub species. Avenue plantation has done along the adjoining roads of the project site. Also individual industrial units are also advised to maintain green belt for at least 33% of the allotted plot area as applicable.
8	Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.	Noted and weep holes will be provided as suggested. Individual industries are advised to do the same.
9	Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 4mts. above the highest ground water table.	Noted. The project area and the industries proposed to operate within the area will be informed to provide with rain water harvesting systems and the industries will be advised to adapt pre-treatment systems as per the guidelines set by KSPCB/CPCB. The rainwater recharge well of sufficient capacity will be dug as per the guidelines.
10	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	Necessary approvals will be obtained for using ground water and CGWA guidelines will be followed to monitor ground water level and its quality. No permission will be provided by KIADB for new Borewell drilling without the prior approval from Central Ground Water Authority.
11	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading should be fully internalized and no public space should be utilized.	Noted. Depending on the roadways surrounding the project site and traffic conditions in the proposed area, entry and exit points have been provided and the roads inside the project area will be well built to avoid any kind of traffic congestion. Individual industries are strictly advised to provide parking facilities only in the allotted plot areas and not to use public space.

12	Energy conservation measures like installation of LED for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used LEDs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.	Energy conservation measures will be adopted wherever possible. Necessary safety measures will be taken for the disposal of CFLs and TFLs or any type of waste which can lead to contamination. Solar panels will be used wherever possible. Industries units in the project area will also be advised to do the same.
13	The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	Noted and complied. All construction and hazardous waste generated during the construction phase will be stored in safe and secure manner and disposed carefully, to prevent contamination of water environment. Industrial units will also be advised to follow the same.
<b>B</b>	<b>GENERAL CONIDITIONS:</b>	
1	The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.	Agreed. All necessary measures and steps will be taken for the protection of environment and conservation of natural resources.
2	Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.	Noted and complied. Required infrastructure facility and fuel will be provided to all the labourers for cooking during construction phase.
3	Six monthly monitoring reports should be submitted to the Ministry and its concerned Regional Office.	Noted.
4	A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the concerned Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.	Noted and Complied.
5	The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	Complied. KIADB has already setup an Environment management cell with necessary facilities and qualified personnel to look after the Environmental aspects to ensure that there is no damage to the Environment.

6	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.	Noted and followed.
7	The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act the 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.	Noted.
8	Officials from the concerned Regional Office of MoEF&CC who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the concerned Regional Office of MoEF&CC.	Noted. Full cooperation, facilities & the required documents will be provided during the inspection and whenever required by the concerned authorities. As suggested complete set of all the required documents has been submitted to Regional Office- MoEF&CC at Bangalore.
9	The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted.
10	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted. All the necessary approvals and clearances as applicable will be obtained from the concerned authorities. Industrial units in the project area are also strictly informed to do the same before starting any kind of activities.

11	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at <a href="http://www.envfor.nic.in">http://www.envfor.nic.in</a> . The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the concerned Regional office of this Ministry.	Noted and followed.
12	This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.	Noted.
13	Any appeal against this clearance 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.	Noted.
14	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad. Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	Noted and followed.
15	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the concerned Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, PM2.5, SO2, NO2 (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Noted and will be complied.

16	The environmental statement for each financial year ending 31st March in Form-Vas is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the concerned Regional Office of MoEF&CC by e-mail.	Noted.
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#### **4.0. Environmental Monitoring Details:**

The MoEF&CC/ SEIAA has made mandatory to submit Six- monthly Compliance reports for everyone who has obtained Environmental Clearance. For this purpose of preparing Compliance report and Environmental Monitoring, the KIADB has provided the work to M/s. Robust Materials Technology Pvt. Ltd. to carry out Environmental Monitoring for Industrial Areas.

#### **4.1. Ambient Air Quality Monitoring:**

The Ambient Air Quality Monitoring is carried out for parameters such as Respirable Particular Matter (PM 10), Fine Particulate Matter (PM 2.5), Sulphur Dioxide (SO<sub>2</sub>) and Nitrogen Dioxide (NO<sub>2</sub>) at 8 Locations and the detailed reports are attached as **Annexure-4**.

The monitoring results reveal the following pollutant concentration with respect to PM, SO<sub>x</sub> and NO<sub>x</sub>:

Sl. No.	Parameters	Limits (As Per NAAQS) for 24hrs	Minimum Value	Maximum Value	Average Value
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	100	59.6	67.7	62.2
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	60	18.6	24.5	22.3
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	80	16.3	23.3	19.9
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	80	8.3	13.5	11.5

The above table reveals that all the monitored values are within the standards prescribed under National AAQM Standards notified on 18.09.2002.



**4.2. Ambient Noise Level Monitoring:**

The monitoring results reveal the following ambient noise concentration at different locations:

Sl. No.	Locations	Noise level in dB(A) Leq		CPCB Standard	
		Day	Night	Lday (Ld)	LNight (Ln)
1	Near Medamaranahalli Village	51.2	42.9	55	45
2	Near Hulugondanahalli Village	52.0	43.4	55	45
3	Near Heddidarmetlu Village	52.4	42.5	55	45
4	Near Devarakaggalahalli Village	53.8	44	75	70
5	Near Cheeluru Village	51.7	43.6	75	70
6	Near KPTCL Station- Project Site	66.1	59.8	55	45
7	Near Bannikuppe Village	53.5	44.5	55	45
8	Near Vaderahalli Village	53.9	44.0	55	45

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB (A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB (A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB (A) (During night time).

The above table reveals that all the monitored values are within the standards prescribed under Noise Rules, 2000.

Ambient Noise Level is monitored and the detailed reports are attached as **Annexure-5**.

**4.3. Water Quality Monitoring:**

Water quality in the industrial area is monitored. The Ground and Surface water samples are collected and analyzed for water quality parameters. The Compiled test reports are attached as **Annexure-6**.

The water quality monitoring was carried out at 8 bore wells (different villages) spread across the study area and the following table gives the details of Maximum, Minimum and Average concentrations of different water quality parameters and the analysis reports reveals that all the parameters are well within the standards prescribed under IS 10500.

Sl. No.	Parameters	Minimum Value	Maximum Value	Average Value
1	Color (hazen units)	<2.0	<2.0	<2.0
2	Odour	Agreeable	Agreeable	Agreeable
3	pH Value	7.4	8.4	7.9
4	Turbidity, NTU	0.1	12.2	3.6
5	Chloride as Cl, mg/L	82.3	219.5	160.0
6	Total hardness as CaCO <sub>3</sub> , mg/L	194.6	544.8	368.1
7	Calcium as Ca, mg/L	39.8	129.8	86.3
8	Magnesium as Mg, mg/L	23.1	55.6	37.0
9	Total dissolved Solids, mg/L	344	780	624.5
10	Sulphate as SO <sub>4</sub> , mg/L	15.1	174.2	84.5
11	Nitrate as NO <sub>3</sub> , mg/L	0.7	27.4	9.4
12	Fluoride as F, mg/L	0.24	0.4	0.3
13	Iron as Fe, mg/L	0.06	0.45	0.2
14	Lead as Pb, mg/L	BDL	BDL	BDL
15	Copper as Cu, mg/L	BDL	BDL	BDL
16	Zinc as Zn, mg/L	BDL	BDL	BDL
17	Chromium as Cr, mg/L	BDL	BDL	BDL
18	Dissolved oxygen, mg/L	2.7	3.5	3.05

**4.4. Soil Quality Monitoring:**

Soil quality in the industrial area is monitored. The soil samples are collected and analysed for different parameters. The compiled test reports are attached as **Annexure-7**.

The soil quality monitoring was carried out at 8 locations (different villages) spread across the study area and the following table gives the details of Maximum, Minimum and Average concentrations of different soil quality parameters and the analysis reports reveals that all the parameters are well within the standards prescribed.

Sl. No.	Soil Parameters	Minimum Value	Maximum Value	Average Value
1	pH (20% Suspension)	6.59	8.5	7.6
2	Conductivity, $\mu\text{mhos/cm}$	86	244	177.5
3	Chloride as Cl, mg/Kg	232.5	485.1	346.7
4	Moisture, %	0.69	9.8	5.2
5	Organic Matter, %	0.93	7.5	3.1
6	Calcium as Ca, mg/Kg	20.9	795.2	442.7
7	Magnesium Mg, mg/Kg	72	396	235.2
8	Colour	Brown	Brown	Brown
9	Sulphur as S, mg/Kg	4.1	11.3	7.6
10	Nitrogen as N, %	0.009	0.013	0.011
11	Phosphorous as P, mg/Kg	3.8	6.6	5.0
12	Potassium as K, mg/Kg	14.7	46.9	27.7
13	Copper as Cu, mg/Kg	16.52	39.65	26.3
14	Chromium as Cr, mg/Kg	16.45	244.59	79.8
15	Zinc as Zn, mg/Kg	26.69	66.39	43.1
16	Lead as Pb, mg/Kg	7.7	34.47	20.5
17	Nickel as Ni, mg/Kg	17.91	62.36	38.7
18	Cadmium as Cd, mg/Kg	<0.1	<0.1	<0.1

**F.No. 21-142/2015-IA.III**

Government of India  
Ministry of Environment, Forest and Climate Change  
(Impact Assessment Division)

Indira Paryavaran Bhawan,  
Jor Bagh Road, Aliganj  
New Delhi - 110 003

Dated: 21<sup>st</sup> September, 2017

To

The Development Officer and Executive Engineer-I  
Karnataka Industrial Areas Development Board  
#14/3, 2nd Floor, Aravinda Bhavana  
Nrupathunga Road  
Bangalore - 560 001 (Karnataka)

**Sub: Development of Combined Harohalli Phase II & Phase III Industrial Area at Ramanagara, Karnataka by M/s Karnataka Industrial Areas Development Board - Environmental Clearance reg.**

Sir,

This has reference to your letter No. No. KIADB/DO&EE-I/1876/2016-17 dated 14<sup>th</sup> March, 2017, submitting the above proposal to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986.

2. The proposal for **Development of Combined Harohalli Phase II & Phase III Industrial Area at Ramanagara, Karnataka by M/s Karnataka Industrial Areas Development Board**, was considered by the Expert Appraisal Committee (EAC) for Industrial Estate/Area, SEZ and Highways projects, in its meetings held on 6-7 April, 2017 and 9<sup>th</sup> August, 2017.

3. The details of the project, as per the documents submitted by project proponent, and also as informed during the above said EAC meetings with the help of EIA Consultant Ramky Enviro Service Limited, Hyderabad, are reported to be as under:



(i) The project is for combined development of Harohalli Phase II & III Industrial Area at Harohalli village, Kanakapura taluk, District Ramnagara (Karnataka).

(ii) It will provide hassle free production environment for industries like machine components & fabrication, plastic bags & packaging accessories, textiles & readymade garments, granite cutting & polishing, corrugated boxes & allied products, electronics/ telecommunication, general engineering, automotive, aerospace, agro and food processing/chemicals, media & entertainment, rubber & plastic units, handicrafts etc.

(iii) Total area earmarked for the proposed combined industrial area is about 904.86 ha (Phase II - 371.92 ha and Phase III - 532.94 ha). Presently most of the Phase II is under operation for which EC has been obtained from Karnataka SEAC in 2013 and Phase III is covered with Mango gardens, plantations of Teak, Coconut, Malabar Neem, Mahogany and Eucalyptus. The role of the KIADB for the proposed industrial area will consists of developing common infrastructural facilities - roads, water source, power, drainage, street lightening, greenbelt, CETP and CSTP etc. Social Infrastructure - banks, post office, canteen, primary health center etc.

(iv) **Water requirement:** The total water requirement will be 11360 KLD which will be sourced through Vrishabhavati treatment plant and Cauvery River water from BWSSB.

(v) **Waste water generation:** 5282 KLD will be treated in CETP/CSTP for recycling & reusing.

(vi) **Municipal solid waste:** About 5000 kg/day will be disposed to nearest municipal bins.

(vii) **Power requirement:** Total power required is 8000 kW and source is BESCOM.

(viii) **RWH:** Individual industries will develop their own rain water harvesting structures in their respective plots and storm water drains will be developed all along the road.

(ix) **Parking facility:** Common parking area of 7.84 Ha (Phase II) and 39.24 Ha (Phase III) is provided for the heavy industrial trucks and heavy vehicles.

(x) **Investment/Cost:** Cost of the project (development of industrial area) is Rs.1561 Crores.



(xi) **Benefits of the project:**

- Industrial areas support startups, new enterprise incubation, development of knowledge-based business and offer an environment where local and international firms can interact with centers of knowledge creation.
- They act as innovation club, promoting interactive learning and the commercialization of research outputs and can exploit local entrepreneurial potential.
- Able to attract new business by providing an integrated infrastructure in one location.
- To set aside industrial uses from urban areas to try to reduce the environmental and social impact of the industrial uses.
- To provide for localized environmental controls those are specific to the needs of the industrial area.

(xii) **Trees cutting:** There will be tree cutting of around 7700 species in the proposed site and transplantation will be carried out wherever possible. For every tree cutting plantation will be carried out in 1:3 ratio in the greenbelt areas.

(xiii) **Employment potential:** About 23,500 people will get employment.

(xiv) **Court cases, if any:** No.

(xv) **ToR details:** The ToR was accorded to the project by the Ministry vide letter No. 21-142/2015-IA.III dated 1<sup>st</sup> February, 2016.

(xvi) **Public Hearing:** Public hearing was conducted on 23<sup>rd</sup> December 2016 at the project site near Kavitha Farm, Jakkasandra-Cheelur Road Harohallihobli, Kanakapura taluk, District Ramnagara (Karnataka). Major issues raised were:-

- Pollution problems illegal disposal of the effluents into the water bodies by the existing industries in the industrial area.
- Providing employment to the local villagers in the proposed industries.
- Maintenance of existing greenery in addition to the proposed afforestation.
- Disparity in land compensation.
- Maintaining buffer area between industries and village limits.

(xvii) CETP of 5 MLD (in phases) consists of physical, chemical & biological treatment using Advanced MBBR (Moving Bed Biological Reactor) technology to prevent sludge recycling from secondary clarifier.

(xviii) Individual industries will be advised at the time of allocation, to treat wastewater to meet CETP inlet standards or standard prescribed by the SPCB while obtaining CFE. The CETP will be designed to treat the wastewater meeting the discharge standards on land for irrigation (greenbelt or industrial reuse – auxiliary units). Hence no treated waste water will be discharged outside the industrial area.

(xix) The treatment system consists of tertiary treatment of Activated Carbon Filter (ACF) and Mixed Media Filter (MMF) also. The sludge generated from the CETP will be sent to authorized landfill nearby the industrial area.

- (i) Response/action plan of the project proponent on the issues raised during public hearing
  - a. Existing industries in the industrial area will be advised to install air pollution controlling equipment's to reduce/meet their emission levels to CPCB/KSPCB standards.
  - b. Industries present in 2nd phase generating effluents will be advised to send their untreated/partially treated effluents to proposed CETP in combined industrial area for further treatment and treated water will be reused within the industrial area.
  - c. Environmental Officer, KSPCB assured that no industry will be spared in case if it is found to be violating the Pollution Control Acts and Rules and action will be initiated.
- (ii) For II & III Phase land was acquired in different times and compensated based on the negotiations with farmers.
- (iii) Joint Director, DIC, Ramanagara informed that, a survey is in progress for collecting the information about local unemployment, available skilled and unskilled labours, employment opportunities in the existing industries and also jobs given by the industries at present.
- (iv) Deputy Commissioner, Ramanagara informed public that, district administration will strictly implement Sarojini Mahishi report regarding employment to local people. Preference will be given to the local land losers/ persons based on their qualifications and as per the requirement in the industrial units coming up.
- (v) An amount of Rs. 85 lakhs under CSR activities has been allocated for vocational training to local unemployed educated youth.

- (vi) The project proponent submitted the proper action plan on the suggestions given by the chairman, public hearing panel.
- a. A 15 m wide green belt will be provided all along the Industrial Area boundary.
  - b. Less polluting industries will be given preference towards the village side.
  - c. A 50 m wide buffer area will be provided around the water body (Bannikuppe tank) and same will be fenced to prevent illegal disposal of solid waste/effluent.
  - d. An amount of around Rs. 5.5 Crore has been allocated for CSR activities, which is around 1% of total project cost.
  - e. Individual industries will be allocating funds for CSR activities as per existing norms of statutory bodies, which is around 2-3% of their annual profit.

4. The EAC, in its 174<sup>th</sup> meeting held on 9<sup>th</sup> August, 2017, has recommended the project for grant of Environmental Clearance. As per recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance for the 'Development of Combined Harohalli Phase II & Phase III Industrial Area' at Ramanagara, Karnataka by M/s Karnataka Industrial Areas Development Board, under the provisions of the EIA Notification, 2006 and amendments/circulars issued thereon, and subject to the specific and general conditions as under:

#### **PART A - SPECIFIC CONDITIONS**

##### **I. Construction Phase**

- (i) 'Consent to Establish' shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- (ii) To achieve the Zero Liquid Discharge, waste water generated from different industrial operations should be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.
- (iii) Necessary authorization required under the Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016, Solid





Waste Management Rules, 2016 shall be obtained and the provisions contained in the Rules shall be strictly adhered to.

(iv) During construction phase, air pollution and the solid waste management aspects need to be properly addressed ensuring compliance of the Construction and Demolition Waste Management Rules, 2016.

(v) This environmental clearance is only for the said Industrial Area. Any other activity within the Industrial Area would require separate environmental clearance, as applicable under EIA Notification, 2006 as amended from time to time. For all the individual units, environmental clearances, as applicable, shall be obtained from the respective regulatory authorities.

(vi) There shall be a continuous green belt along the plant premises, except at the designated entry and exit points.

(vii) Green belt shall be developed using only native tree and shrub species. No exotic species to be used for green belt development. Project proponent are advised to take help of Botanical Survey of India for developing green belt development plan.

(viii) Project proponent should implement Action Plan based on suggestions and assurances given during public hearing in toto.

(ix) Develop ground water rejuvenation plan for the region from competent agency and provide appropriate financial mechanism to implement the same. This is over and above of Rs. 5.5 Crore, which has been assured for CSR activities.

(x) 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 concerned Regional Office, MoEF&CC along with six monthly Monitoring reports.

(xi) Special purpose vehicle shall be established for implementation, monitoring and compliance of the environmental safeguards.

(xii) All the recommendation of the EMP shall be complied with letter and spirit. All the mitigation measures submitted in the EIA report shall be prepared in a matrix format and the compliance for each mitigation plan



shall be submitted to RO, MoEF&CC along with half yearly compliance report.

(xiii) The member units shall provide storage tanks for storage of effluent for monitoring the characteristics of effluent and to treat the same to meet the prescribed inlet norms before taking into the CETP for further treatment.

(xiv) Proper meters with recording facilities shall be provided to monitor the effluent quality and quantity from member industries to CETP and from CETP to re-use on a continuous basis.

(xv) The project proponent shall establish an environmental monitoring cell with all the potential polluting units as members to review the environmental monitoring data and suggest for improvements.

(xvi) Internal Road widths within the industrial estate shall be minimum 18 m ROW.

(xvii) Common facilities such as repair shops, rest rooms for drivers and attendants shall be provided.

(xviii) All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase.

(xix) Soil and ground water samples will be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and other toxic contaminants.

(xx) Construction spoils, including bituminous material and other hazardous materials, must not be allowed to contaminate watercourses and the dump sites for such material must be secured so that they should not leach into the ground water.

(xxi) Parking space to accommodate trucks, cars, two wheelers and bicycles shall be provided as per the norms.

(xxii) Any hazardous waste generated during development/ construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the State Pollution Control Board.

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(xxiii) The diesel generator sets to be used during development/ construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.

(xxiv) The diesel required for operating DG sets shall be stored in underground tanks and if required, clearance from Chief Controller of Explosives shall be taken.

(xxv) 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 and should be operated only during non-peak hours.

(xxvi) Ambient noise levels should conform to residential standards both during day and night. Incremental pollution loads on the ambient air and noise quality should be closely monitored during development/ construction phase. Adequate measures should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/SPCB.

(xxvii) Fly ash should be used as building material in the construction as per the provisions of Fly Ash Notification of September, 1999 and amended as on 27<sup>th</sup> August, 2003.

(xxviii) Ready mixed concrete must be used in site development and building construction.

(xxix) Storm water control and its re-use as per CGWB and BIS standards for various applications.

(xxx) Water demand during development/construction should be reduced by use of pre-mixed concrete, curing agents and other best practices referred.

(xxxi) Permission to draw ground water, if any, shall be obtained from the competent Authority prior to construction/operation of the project.

(xxxii) Fixtures for showers, toilet flushing and drinking should be of low flow either by use of aerators or pressure reducing devices or sensor based control.

(xxxiii) Regular supervision of the above and other measures for monitoring should be in place all through the development/ construction phase, so as to avoid disturbance to the surroundings.

(xxxiv) The responses/commitments made to the issues raised during public hearing shall be complied with in letter and spirit, and action taken shall be submitted to the Ministry.

(xxxv) For Corporate Social Responsibility activities, 2% of the project cost shall be earmarked. The CSR funds shall be allocated for vocational training programme, development of infrastructure like construction of public toilets etc.

(xxxvi) All member industries shall be instructed to comply with the consent conditions given by PCB/MoEF&CC strictly to maintain ambient air quality within the stipulated standards of CPCB.

(xxxvii) Existing State/Central Government norms shall be followed for providing employment, preference will be given to local educated and unemployed people based on their educational qualification. Vocational training shall be conducted to improve the skills of local people so that they can get employment/self-employment.

(xxxviii) Compensation will be paid as per the land acquisition act of State.

(xxxix) Corporate Environment Responsibility:

- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
- b) The Environment Policy shall prescribe for standard operating process/ procedures to bring into focus any infringements/deviation/ violation of the environmental or forest norms/ conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
- d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/ violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

## **II. Operational Phase**

(i) To achieve the Zero Liquid Discharge, waste water generated from different industrial operations should be properly collected, treated to the prescribed standards and then recycled or reused for the identified uses.

*Ref.*

- (ii) All the topsoil excavated during development/construction activities should be stored for use in horticulture/landscape development within the project site.
- (iii) Disposal of muck during development/construction phase should not create any adverse effect on the neighboring 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.
- (iv) The solid waste generated should be properly collected and segregated. Wet garbage should be composted and dry/inert solid waste should be disposed off to the approved sites for land filling after recovering recyclable material.
- (v) The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- (vi) Noise should be controlled to ensure that it does not exceed the prescribed standards. During night time the noise levels measured at the boundary of the building shall be restricted to the permissible levels to comply with the prevalent regulations.
- (vii) The green belt of the adequate width and density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise.
- (viii) Weep holes in the compound walls shall be provided to ensure natural drainage of rain water in the catchment area during the monsoon period.
- (ix) Rain water harvesting for roof run- off and surface run- off, as plan submitted should be implemented. Before recharging the surface run off, pre-treatment must be done to remove suspended matter, oil and grease. The borewell for rainwater recharging should be kept at least 4 mts. above the highest ground water table.
- (x) The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.
- (xi) Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking, loading and unloading should be fully internalized and no public space should be utilized.

REK

(xii) Energy conservation measures like installation of LED for lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Used LEDs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/rules of the regulatory authority to avoid mercury contamination. Use of solar panels may be done to the extent possible.

(xiii) The buildings should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.

#### **PART – B: GENERAL CONDITIONS**

- i) The environmental safeguards contained in the EIA Report should be implemented in letter and spirit.
- ii) Provision should be made for supply of kerosene or cooking gas and pressure cooker to the labourers during construction phase.
- iii) Six monthly monitoring reports should be submitted to the Ministry and its concerned Regional Office.
- iv) A copy of the environmental clearance letter shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the concerned Regional Office, District Industries centre and Collector's Office/ Tehsildar's office for 30 days.
- v) The project proponent shall set up a separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- vi) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purpose.

5. The above stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and control of Pollution) act the 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification, 2006.

6. Officials from the concerned Regional Office of MoEF&CC who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project

proponents during their inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the concerned Regional Office of MoEF&CC.

7. The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the environment clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

8. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

9. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment, Forest & Climate Change at <http://www.envfor.nic.in>. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the concerned Regional office of this Ministry.

10. This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

11. Any appeal against this clearance 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.

12. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

13. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the

concerned Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub> (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

14. The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the concerned Regional Office of MoEF&CC by e-mail.

*Reema* 21/9/2017  
(Raghu Kumar Kodali)  
Director/Scientist F

Copy to:

1. The Secretary, Department of Environment, Govt. of Karnataka, Bangalore.
2. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi – 32.
3. The Member Secretary, Karnataka State Pollution Control Board, "Parisara Bhavan, 4<sup>th</sup> & 5<sup>th</sup> Floor, # 49, Church Street, Bangalore-01.
4. The APCCF (C), MoEF&CC, Regional Office (SZ), Kendriya Sadan, 4<sup>th</sup> Floor, E&F Wing, 17<sup>th</sup> Main Road, Koramangala II Block, Bangalore-34.
5. IA Division, Monitoring Cell, MOEF, New Delhi - 3.
6. Guard file.

*Reema* 21/9/2017  
(Raghu Kumar Kodali)  
Director/Scientist F





ಫ್ಯಾಕ್ಸ್ / Fax : 080-25586321  
ಈಮೇಲ್ / E-mail : ho@kspcb.gov.in  
ವೆಬ್‌ಸೈಟ್ / Website : http://kspcb.gov.in



19 MAR 2018

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25588151, 25588270  
25588142, 25586520

## ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮಾಲಿನ್ಯ ನಿಯಂತ್ರಣ ಮಂಡಳಿ Karnataka State Pollution Control Board

"ಪರಿಸರಭವನ", 1 ರಿಂದ 5ನೇ ಮಹಡಿಗಳು, ನಂ.49, ಚರ್ಚ್‌ಸ್ಟ್ರೀಟ್, ಬೆಂಗಳೂರು - 560 001, ಕರ್ನಾಟಕ, ಭಾರತ  
"Parisara Bhavana", 1st to 5th Floor, # 49, Church Street, Bengaluru - 560 001, Karnataka, INDIA

HD Reg No. 138099 dated 10.11.2017  
Sakala No. PB0CM0000008942

KIADB - Harohalli

/BY REGD. POST WITH ACK. DUE /  
(This document contains 06 pages)

NO. PCB/567/CNP/17/

OB-1232

Date 19 MAR 2018

To  
The Development Officer & Executive Engineer – I,  
M/s. Karnataka Industrial Area Development Board  
Maharshi Aravinda Bhavan,  
14/3, 1<sup>st</sup> Floor, Nrupathunga Road,  
Bengaluru – 560 009.

Sir,

Sub: Consent for Establishment (CFE) to develop Industrial Area with total built up area of 904.86 Ha. (Phase – II – 371.92 Ha. & Phase – III – 532.94 Ha) located at Various Sy. Nos. of Harohalli, Medamaranahalli, Hulugondanahalli, Bannikuppe, Devarakaggalahalli, Jakkasandra Cheeluru Villages of Harohalli Hobli, Kanakapura Taluk, Ramanagara District by M/s. Karnataka Industrial Areas Development Board.

- Ref: 1. CFE applications received at Regional Office, KSPCB, Ramnagara on 10.11.2017.  
2. Inspection of the proposed project site by Officer of the Regional Office, KSPCB, Ramnagara on 04.12.2017 & 16.12.2017.  
3. EC No. F. No. 21-142/2015-IA.III dated 21.09.2017.  
4. Proceedings of the Consent Committee Meeting held on 29.01.2018.

♦♦♦♦

With reference to the above, it is to be informed that this Board hereby accords Consent for Establishment under the Water (Prevention & Control of Pollution) Act 1974, to develop Industrial Area with total built up area of 904.86 Ha. (Phase – II – 371.92 Ha. & Phase – III – 532.94 Ha) located at Various Sy. Nos. of Harohalli, Medamaranahalli, Hulugondanahalli, Bannikuppe, Devarakaggalahalli, Jakkasandra Cheeluru Villages of Harohalli Hobli, Kanakapura Taluk, Ramanagara District, subject to the following conditions

(Sadiq Ahmed)  
SENIOR ENVIRONMENTAL OFFICER



**I. Environmental Aspects and Management during the course of construction:**

- a) The applicant shall arrange services like housing facility, water supply, sewage facilities on a temporary basis at construction site and same shall be maintained without any adverse impact on the environment.
- b) The applicant shall control the movement of vehicles carrying construction materials in order to avoid noise pollution in the surrounding.
- c) The applicant shall obtain Consent for Operation (CFO) from the Board before handing over to residents Association.
- d) This CFE is issued only from the point of water pollution control and does not have any relevance over land dispute, any pending cases with any Departments/Hon'ble Courts.
- e) Sewage Treatment Plant (STP) and solid waste processing facility (for Organic) shall be provided and operated satisfactorily by the project proponent himself before it is handed over to Association/Company.
- f) **The project proponent shall strictly adhere to the conditions stipulated in the Environmental clearance (EC) issued from the State Level Environment Impact Assessment Authority-Karnataka vide No. F. No. 21-142/2015-IA.III dated 21.09.2017.**
- g) **The applicant shall strictly adhere to the zoning Regulation with respect to buffer zone towards any Lake, Nala, drain or any other water bodies as per the local planning authority guidelines.**
- h) The applicant shall submit final approved plan from competent authority to the Board before taking up any construction activities.

**II. WATER CONSUMPTION:**

1. The water consumption for the above project activity shall not exceed **11360 KLD**. The applicant shall not draw water from borewell without permission of CGWA.

**III. WATER POLLUTION CONTROL:**

1. The total quantity of sewage shall not exceed **1026 KLD** and shall be treated in the sewage treatment plant of capacity **1200 KLD** with the treatment scheme as submitted in the STP proposal to meet the standards stipulated below before utilizing for Urban Reuse viz., landscape irrigation, vehicle washing, toilet flushing, use in fire protection and commercial air conditioners. STP shall be constructed on modular basis to cater to phase-wise development and applicant shall follow STP construction and operation guidelines published by the Board and the location of the STP should be above ground level & should be easily accessible to the inspecting officer.

  
 (Sadia Ahmed)  
**SENIOR ENVIRONMENTAL OFFICER**

Sl. No	Parameter	Parameters Limit.
01.	pH	6.5 – 9.0
02.	BOD (mg/l)	Not more than 10
03.	COD (mg/l)	Not more than 50
04.	TSS (mg/l)	Not more than 20
05.	NH4-N (mg/l)	Not more than 5
06.	N-Total (mg/l)	Not more than 10
07.	Fecal Coliform (MPN/100 ml).	Less than 100

2. Applicant shall add appropriate disinfectant to treated sewage to ensure some residual chlorine preferably in the range of 1 mg/l. to 3 mg/l.
3. If the treatment plant do not achieve the effluent standards stipulated under conditions (1) above or if it is found to be inadequate, then the applicant shall have to modify the units so as to meet the standards with prior consent of the Board.
4. All the treatment units shall be made impervious and there shall not be any discharge of sewage outside the premises.
5. Separate energy meter shall be provided to STP's also flow meters and a log book on reading of energy meter and flow meters shall be maintained.
6. The applicant shall adhere to the CFE/CFO conditions even after handing over Layout/Plots to individual persons.
7. The applicant shall earmark place for CETP & take steps for CETP for treating trade effluent.

#### IV. AIR POLLUTION CONTROL:

1. There shall not be any air pollution sources without prior approval from the Board.
2. The applicant shall provide dust suppression systems with water sprinkling system during construction period.
3. The applicant should make provisions for dual piping system to use the treated sewage water for toilet flushing, gardening and other secondary purposes

#### V. NOISE POLLUTION CONTROL:

1. The applicant shall ensure that the ambient noise levels and ambient air quality within its premises during construction and after construction shall not exceed the limits specified in the Environment (Protection) Rules, i.e., the noise level from the noise generating equipments viz., DG sets, AC units etc., shall not exceed 55 dB(A) Leq during day time and 45 dB(A) Leq during night time.

  
 (Sadiq Ahmed)  
 SENIOR ENVIRONMENTAL OFFICER



## **VI. SOLID WASTE DISPOSAL & Hazardous Waste Disposal:**

1. The applicant shall collect, treat and dispose off all solid waste generated during construction i.e. Muck, and Garbage after construction if any in such manner so as not to cause environmental pollution.
2. The applicant shall apply and obtain authorization for management & handling of waste oil under Hazardous & other Waste (Management & Transboundary Movement) Rules, 2016.
3. The applicant shall earmark sufficient place for segregation and processing and convert the bio-degradable solid waste generated from unit into compost within their premises with scientific method.
4. **The applicant shall strictly follow the Government Notification No. FEE 17 EPC 2012 Bangalore dated 11.03.2016 with regard to plastics ban.**
5. **The applicant shall strictly follow Construction & Demolition Waste Management Rules, 2016. The applicant shall comply with the following conditions stipulated by MoEF & CC, GoI Notification No. G.S.R. 94 (E) dated 25.01.2018.**
  - (a) No building or infrastructure project requiring Environmental Clearance shall be implemented without approved Environmental Management plan inclusive of dust mitigation measures.
  - (b) Roads leading to or at construction sites must be paved & blacktopped (ie., metallic roads).
  - (c) No excavation of soil shall be carried out without adequate dust mitigation measures in place.
  - (d) No loose soil or sand or Construction & Demolition waste or any other construction material that causes dust shall be left uncovered.
  - (e) Wind – breaker of appropriate height i.e., 1/3<sup>rd</sup> of the building height & maximum up to 10m shall be provided.
  - (f) Water sprinkling system shall be put in place.
  - (g) Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.
  - (h) Grinding & cutting of building materials in open area shall be prohibited.
  - (I) Construction material & waste should be stored only within earmarked area & road side storage of construction material & waste shall be prohibited.
  - (j) No uncovered vehicles carrying construction material & waste shall be permitted.

(Sadiq Ahmed)

**SENIOR ENVIRONMENTAL OFFICER.**

(k) Construction & Demolition waste processing & disposal site shall be identified & required dust mitigation measures be notified at the site.

#### **VII. HEALTH & SAFETY:**

1. The applicant shall provide all necessary healthcare facilities to workers and shall carry out routine health survey among workers.
2. The applicant shall provide all safety measures including personal protective equipments to workers during construction.

#### **VIII. GENERAL:**

1. The applicant shall maintain natural nallah and other such features as in the revenue survey map and adopt zonal regulations of the concerned Planning Authorities.
2. The applicant must create structure/facility for rain water harvesting and ground water recharge.
4. The applicant shall provide dual piping system in the layout in order to use the treated sewage for toilet flushing, gardening and other secondary purposes.
5. The applicant shall arrange for alternate power supply in the form of D.G.Set to run and operate the essential units of sewage treatment plant, in event of brake down of regular supply from Electricity Board.
6. Exact date of commissioning of the sewage treatment plant shall be informed to this Board 45 days in advance so as to make necessary inspection of the plant and the pollution control measures provided by the applicant
7. The applicant shall appoint a qualified Environmental Engineer/ Scientist for the Management of Environmental aspects and also establish Environmental Cell to oversee the operation of STP.
8. The applicant shall make provisions for wooded Buffer zone all along the periphery of the layout.
9. The applicant shall implement the Environmental Management Plan during construction and after construction as given under EMP report.
10. The applicant shall not change or alter (a) number of Sites (b) Layout plan (c) the quality, quantity or rate of discharge/ emissions and (d) install/replace/alter the water or air pollution control measures without the prior approval of the Board.
11. The applicant shall immediately report to the Board of any accident or unforeseen act or event resulting in release of discharge of effluents or emissions or solid wastes etc., in excess of the standards stipulated, and the applicant shall immediately take appropriate corrective and preventive actions under intimation.
12. The Board reserves the right to review, impose additional condition or conditions, revoke, change or alter the terms and conditions.

(Sadiq Ahmed)  
  
**SENIOR ENVIRONMENTAL OFFICER.**



13. This consent for establishment is valid for **Five years** from the date of issue for completion of all construction operations.
14. This CFE does not give any right to the Party/Project Authority to forego any legal requirement, which is necessary for setting/operation of the project.
15. The project authorities shall dispose scientifically Bio-Medical waste and electronic waste to authorized common disposal facility and authorized recyclers respectively by entering into agreement as per new Bio Medical Waste Management Rules, 2016 and E- Waste (Management) Rules, 2016.
16. The project authorities shall not use Kharab land if any for any purpose and keep available to the general public duly displaying a board as public property. No structure of any kind be put up in the Kharab land and shall be afforested and maintained as green belt only.
17. The applicant is liable to reinstate or restore, damaged or destroyed elements of environment at his cost, failing which, the applicant/occupier as the case may be shall be liable to pay the entire cost of remediation or restoration and pay in advance an amount equal to the cost estimated by Competent Agency or Committee.
18. The CFE is issued without prejudice to the Court case pending in any Hon'ble Court.
19. The EC only permitted industries to be allowed in the industrial area.

Please note that separate consent of the Board for discharge of liquid effluent shall have to be obtained by remitting prescribed consent fee. The application for consent has to be made 45 days in advance to completion of Residential Layout. Issue of consent will be considered only after completion of sewage treatment plant, solid waste management facilities.

The receipt of this letter may please be acknowledged.

For and on behalf of  
Karnataka State Pollution Control Board

  
SENIOR ENVIRONMENTAL OFFICER.



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Sd/- Executive Engineer, Project (West) Division

**"Pay development charges, help to develop Bengaluru"**



## KARNATAKA INDUSTRIAL AREAS DEVELOPMENT BOARD

(A Government of Karnataka Undertaking)

No. 49, East Wing, 4<sup>th</sup> & 5<sup>th</sup> Floor, Khanija Bhavan, Race Course  
Road, Bengaluru - 560 001, Ph.: 22265383

Fax: 080-22267901 website: www.kladb.in

e-Mail: cdoce@kladb.in

### PUBLIC ANNOUNCEMENT

(Through GoK e-Procurement Portal Only)

KIADB has obtained Environmental Clearance from MoEF&CC/SEIAA for the following Industrial Areas. The Copies of the Environmental Clearances are available on the website of MoEF&CC (<http://moef.nic.in>)/SEIAA (<http://seiaa.karnataka.gov.in>).

#### A. Environmental Clearance from MoEF&CC

1. Sompura Industrial Area, 1&2 Stage, Nelamangala Taluk, Bengaluru Rural District.
2. Vasanthanarasapura Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Tumakuru District.
3. Gowribidanur, 1<sup>st</sup> & 2<sup>nd</sup> Stage Industrial Area, Chikkaballapura District.
4. Kadechuru Industrial Area, Kadechuru Village, Yadgiri Taluk & District.
5. Chamarajanagara Industrial Area, Badanakuppe and Kallambelli villages, Chamarajanagara Taluk & District.
6. Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramangara District
7. Jakanasandra Industrial Area, Jakasandra village, Malur Taluk, Kolar District.

#### B. Environmental Clearance from SEIAA

- 1) Malur Industrial Area, 4<sup>th</sup> Phase, Malur Taluk, Kolar District.
- 2) Narasapura Industrial Area, 1<sup>st</sup> Stage, Kolar District.
- 3) IT/BT Park, Gamanagatti, Tarihal Village, Dharwad District.
- 4) Bidadi Industrial Area, 2<sup>nd</sup> Phase, Ramanagara District.
- 5) Vemagal Industrial Area, Kolar District.
- 6) Vasanthanarasapura Industrial Area, 1<sup>st</sup> Stage, Tumakuru Taluk & District.
- 7) Hi-Tech Defence & Aerospace Components, Devanahalli Taluk, Bengaluru Rural District.
- 8) Doddaballapura Industrial Area, 3<sup>rd</sup> Phase, Obdenahalli, Doddaballapura Taluk, Bangalore Rural District.
- 9) Kittur Industrial Area, Bailahongal Taluk, Belagavi District.
- 10) Nandur Kesaratagi Industrial Area, 2<sup>nd</sup> Phase, Kalaburagi Taluk & District.

Sd/- Chief Development Officer & Chief Engineer

## RAVARI NIGAM LIMITED

(Karnataka Enterprise)

Executive Engineer,

Project Division, Ranebennur.

**Madhapura Corrigendum-3/**

**dtd: 19-03-2018**

### CORRIGENDUM-3

Notification No. 3944/017-18

Corrigendum -1 Notification

2018 3) This office

4447 dtd: 03-03-2018

Notifications cited at Ref (1) to (3)

work of "Survey, Investigation,

Testing and Commissioning of

and Works consisting of Intake

in pump house, Power supply

transmission lines, Rising Main,

and Construction of Gravity

structure for lifting of water from

ankaranahalli village to fill the

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## ROBUST MATERIALS TECHNOLOGY PVT. LTD.

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No. 94, 2nd Floor, Thirumala Complex, Nagarabhavi Main Road, NGEF Layout,  
Nagarabhavi, Bengaluru - 560 072. Tel : 080 2318 6230

Email : info@robustmaterials.com Website : www.robustmaterials.com

### TEST REPORT



#### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00182
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00182
Date of Receipt	: 13/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Medamaranahalli Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	60.2	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	20.3	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	17.5	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	11.4	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech AAS-217 NL	Envirotech AAS 127-mini
Sl. No.	18-J-739	18-J-889
Calibrated on date	17-03-2020	21-01-2021
Calibration due date	16-03-2021	20-01-2022

-----END OF THE REPORT-----

19/2/21

Verified by

19/02/21  
Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.



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Nagarabhavi, Bengaluru - 560 072. Tel : 080 2318 6230

Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00184
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00184
Date of Receipt	: 13/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Hulugondanahalli Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	61.4	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	22.8	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	19.2	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	12.0	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech APM-460 BL	Envirotech APM-550
Sl. No.	2475-DTJ-2012	1406-DTJ-2013
Calibrated on date	12-11-2020	07-11-2020
Calibration due date	11-11-2021	06-11-2021

-----END OF THE REPORT-----

19/2/21  
Verified by

19/02/21  
Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.





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Nagarabhavi, Bengaluru - 560 072. Tel : 080 2318 6230

Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00186
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00186
Date of Receipt	: 13/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Heddidarmetlu Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	63.3	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	24.1	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	21.7	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	12.3	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech APM-550	Envirotech APM-550
Sl. No.	2476-DTJ-2012	1159-DTG-2012
Calibrated on date	17-03-2020	17-03-2020
Calibration due date	16-03-2021	16-03-2021

-----END OF THE REPORT-----

19/2/21  
Verified by

19/02/21  
Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.



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Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00188
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00188
Date of Receipt	: 13/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Devarakagalahalli Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	61.9	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	22.8	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	23.3	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	13.5	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Ecotech AAS 217 NL	Ecotech AAS 217
Sl. No.	20-I-932	20-I-1165
Calibrated on date	16-12-2020	16-12-2020
Calibration due date	15-12-2021	15-12-2021

-----END OF THE REPORT-----

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Authorized Signatory

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No. 94, 2nd Floor, Thirumala Complex, Nagarabhavi Main Road, NGEF Layout,  
Nagarabhavi, Bengaluru - 560 072. Tel : 080 2318 6230

Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00190
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00190
Date of Receipt	: 13/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Cheeluru Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	59.6	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	18.6	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	16.3	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	8.3	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards.

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Ecotech AAS-217 NL	Ecotech AAS 217
Sl. No.	20-I-932	20-I-1165
Calibrated on date	16-12-2020	16-12-2020
Calibration due date	15-12-2021	15-12-2021

19/2/21

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-----END OF THE REPORT-----

19/02/21  
Authorized Signatory

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Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00192
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 13/02/2021 to 14/02/2021
Job Order No	: RE/2021/00192
Date of Receipt	: 14/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near KPTCL Station – Project Site.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	67.7	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	24.5	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	22.4	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	12.5	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards.

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech AAS-217 NL	Envirotech AAS 127-mini
Sl. No.	18-J-739	18-J-889
Calibrated on date	17-03-2020	21-01-2021
Calibration due date	16-03-2021	20-01-2022

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**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.





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Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00194
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 13/02/2021 to 14/02/2021
Job Order No	: RE/2021/00194
Date of Receipt	: 14/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Bannikuppe Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	62.9	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	23.7	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	18.6	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	12.2	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

#### Details of Equipment used for monitoring

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech APM-460 BL	Envirotech APM-550
Sl. No.	2475-DTJ-2012	1406-DTJ-2013
Calibrated on date	12-11-2020	07-11-2020
Calibration due date	11-11-2021	06-11-2021

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**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.

**TEST REPORT**



**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
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Karnataka 560 001.

Report No.	: RE/2021/00196
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 13/02/2021 to 14/02/2021
Job Order No	: RE/2021/00196
Date of Receipt	: 14/02/2021
Analysis Start date	: 15/02/2021
Analysis Completed date	: 19/02/2021

**Sample Particulars:** Ambient Air Monitoring for 24 hrs.

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Location:** Near Vaderahalli Village.

Sl. No.	Parameters	Results	Limits (As Per NAAQS) For 24hrs	Protocol
1	Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>	60.7	100	IS-5182 (P-23)
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	21.5	60	IS-5182 (P-24)
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	19.8	80	IS-5182 (P-06)
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	9.9	80	IS-5182 (P-02)

**INFERENCE:** The measured values for the above tested parameters are within as per the NAAQ Standards

**Details of Equipment used for monitoring**

Name of the equipment	Respirable Dust Sampler	Fine Particulate Sampler
Model	Envirotech APM-550	Envirotech APM-550
Sl. No.	2476-DTJ-2012	1159-DTG-2012
Calibrated on date	17-03-2020	17-03-2020
Calibration due date	16-03-2021	16-03-2021

-----END OF THE REPORT-----

  
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19/02/21  
Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.





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Email : info@robustmaterials.com Website : www.robustmaterials.com

### TEST REPORT



#### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00183
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00183
Date of Receipt	: 13/02/2021
Analysis Start date	: 19/02/2021
Analysis Completed date	: 19/02/2021

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Particulars:** Noise Monitoring for 24 hrs.

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00183	Near Medamaranahalli Village	6:01 AM to 10:00 PM	42.7	61.4	51.2
		10:01 PM to 6:00 AM	35.2	52.2	42.9

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear

#### INFERENCE

**As per CPCB Standards,**

**Report Status:** - The measured values for the above locations are within the standards.

Verified by

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Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.

**TEST REPORT**




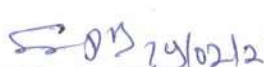
<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00185
	Report date	: 19/02/2021
	Ref.	: Test Request Form
	Date of Sampling	: 12/02/2021 to 13/02/2021
	Job Order No	: RE/2021/00185
	Date of Receipt	: 13/02/2021
	Analysis Start date	: 19/02/2021
		Analysis Completed date : 19/02/2021
<b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).		
<b>Sample Particulars:</b> Noise Monitoring for 24 hrs.		

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00185	Near Hulugondanahalli Village	6:01 AM to 10:00 PM	43.1	62.7	52.0
		10:01 PM to 6:00 AM	36.8	51.2	43.4

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.!
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear

<b>INFERENCE</b>	<b>As per CPCB Standards,</b> <b>Report Status:</b> - The measured values for the above locations are within the standards.
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**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.



**TEST REPORT**





<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00187
	Report date	: 19/02/2021
	Ref.	: Test Request Form
	Date of Sampling	: 12/02/2021 to 13/02/2021
	Job Order No	: RE/2021/00187
	Date of Receipt	: 13/02/2021
	Analysis Start date	: 19/02/2021
		Analysis Completed date : 19/02/2021
<b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).		
<b>Sample Particulars:</b> Noise Monitoring for 24 hrs.		

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00187	Near Heddidarmetlu Village	6:01 AM to 10:00 PM	45.6	60.2	52.4
		10:01 PM to 6:00 AM	37.5	48.1	42.5

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
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- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear

<b>INFERENCE</b>	<b>As per CPCB Standards,</b>
<b>Report Status:</b> - The measured values for the above locations are within the standards.	
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             19/2/21  <b>Verified by</b> </div> <div style="text-align: center;">           -----END OF THE REPORT-----     <b>Authorized Signatory</b> </div> </div>	

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.

**TEST REPORT**


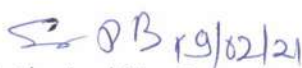


<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00189
	Report date	: 19/02/2021
	Ref.	: Test Request Form
	Date of Sampling	: 12/02/2021 to 13/02/2021
	Job Order No	: RE/2021/00189
	Date of Receipt	: 13/02/2021
	Analysis Start date	: 19/02/2021
	Analysis Completed date	: 19/02/2021
<b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).		
<b>Sample Particulars:</b> Noise Monitoring for 24 hrs.		

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00189	Near Devarakaggalahalli Village	6:01 AM to 10:00 PM	42.9	67.5	53.8
		10:01 PM to 6:00 AM	40.5	47.8	44.0

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear

<b>INFERENCE</b>	<b>As per CPCB Standards,</b> <b>Report Status:</b> - The measured values for the above locations are within the standards.
<p style="text-align: center;">-----END OF THE REPORT-----</p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">             19/2/21            Verified by         </div> <div style="text-align: center;">             19/02/21            Authorized Signatory         </div> </div>	

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**TEST REPORT**



**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00191
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 12/02/2021 to 13/02/2021
Job Order No	: RE/2021/00191
Date of Receipt	: 13/02/2021
Analysis Start date	: 19/02/2021
Analysis Completed date	: 19/02/2021

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Particulars:** Noise Monitoring for 24 hrs.

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00191	Near Cheeluru Village	6:01 AM to 10:00 PM	42.7	62.7	51.7
		10:01 PM to 6:00 AM	36.5	52.2	43.6

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear

**INFERENCE**

**As per CPCB Standards,**

**Report Status:** - The measured values for the above locations are within the standards.

-----END OF THE REPORT-----

  
Verified by

  
Authorized Signatory

**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.

**TEST REPORT**


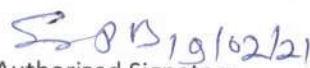


<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00193
	Report date	: 19/02/2021
	Ref.	: Test Request Form
	Date of Sampling	: 13/02/2021 to 14/02/2021
	Job Order No	: RE/2021/00193
	Date of Receipt	: 14/02/2021
	Analysis Start date	: 19/02/2021
	Analysis Completed date	: 19/02/2021
<b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).		
<b>Sample Particulars:</b> Noise Monitoring for 24 hrs.		

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00193	Near KPTCL Station- Project Site	6:01 AM to 10:00 PM	55.3	78.9	66.1
		10:01 PM to 6:00 AM	52.4	68.2	59.8

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear.

<b>INFERENCE</b>	<b>As per CPCB Standards,</b> <b>Report Status:</b> - The measured values for the above locations are within the standards.
<p style="text-align: center;">-----END OF THE REPORT-----</p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">             19/2/21            Verified by         </div> <div style="text-align: center;">             19/02/21            Authorized Signatory         </div> </div>	

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**TEST REPORT**



**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00195
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 13/02/2021 to 14/02/2021
Job Order No	: RE/2021/00195
Date of Receipt	: 14/02/2021
Analysis Start date	: 19/02/2021
Analysis Completed date	: 19/02/2021

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Particulars:** Noise Monitoring for 24 hrs.

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00195	Near Bannikuppe Village	6:01 AM to 10:00 PM	47.6	60.1	53.5
		10:01 PM to 6:00 AM	37.1	53.6	44.5

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
- A "decibel" is a unit in which noise is measured.
- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear.

**INFERENCE**

**As per CPCB Standards,**

**Report Status:** - The measured values for the above locations are within the standards.

-----END OF THE REPORT-----

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Email : info@robustmaterials.com Website : www.robustmaterials.com

## TEST REPORT



### M/s. Karnataka Industrial Areas Development Board (KIADB).

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00197
Report date	: 19/02/2021
Ref.	: Test Request Form
Date of Sampling	: 13/02/2021 to 14/02/2021
Job Order No	: RE/2021/00197
Date of Receipt	: 14/02/2021
Analysis Start date	: 19/02/2021
Analysis Completed date	: 19/02/2021

**Name of the Industrial Area:** Harohalli Industrial Area, 2nd & 3rd Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A).

**Sample Particulars:** Noise Monitoring for 24 hrs.

J.O.No.	Location	Time Frequency	L min dB(A)	L max dB(A)	L eq dB(A)
RE/2021/00197	Near Vaderahalli Village	6:01 AM to 10:00 PM	42.8	67.8	53.9
		10:01 PM to 6:00 AM	35.2	54.9	44.0

**Note:** Noise Level Stipulated by KSPCB for Residential area is 55 dB (A) (During day time) and 45 dB(A) (During night time), For Commercial area 65 dB (A) (During day time) and 55 dB(A) (During night time), For Industrial area 75 dB (A) (During day time) and 70 dB(A) (During night time)

- Day Time is reckoned between 6 A.M and 10 P.M.
- Night Time is reckoned between 10 P.M and 6 A.M.
- Leq: It is energy mean of the noise level over a specified period.
- \*-dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.]
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- "A", in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to Frequency response characteristics of the human ear.

#### INFERENCE

**As per CPCB Standards,**

**Report Status:** - The measured values for the above locations are within the standards.

Verified by

29/2/21

-----END OF THE REPORT-----

Authorized Signatory

29/2/21

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**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No. 49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
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Karnataka 560 001.

Report No.	: RE/2021/00198
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00198
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

**Sample Qty: 2 Ltrs**

**Name of the Industrial Area:** Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

**Sample Particulars:** One sample of **Borewell Water - Near Medamaranahalli Village.**

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	8.1	6.5 – 8.5	No relaxation	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	0.4	1	5	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	192.1	250	1000	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	544.8	200	600	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	126.4	75	200	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	55.6	30	100	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	634.0	500	2000	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	125.5	200	400	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	27.4	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.3	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.13	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	0.34	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part – 49): 1994 Reaff 2019

*[Signature]*  
25/02/21  
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25/02/21  
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### TEST REPORT

#### M/s. Karnataka Industrial Areas Development Board (KIADB).

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00198
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00198
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near Medamaranahalli Village.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	2.7	-	-	APHA 23 <sup>rd</sup> Edition

Note: BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

Remarks: The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

*[Signature]*  
25/02/21  
Verified by

*[Signature]* 25/02/21  
Authorized by

Note: 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.





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Report No.	: RE/2021/00199
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Reference	: Test Request Form
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Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near Hulugondanahalli Village.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
Description: Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part - 5): 1983 Reaff.2018
3	pH Value	7.4	6.5 - 8.5	No relaxation	IS 3025 (Part - 11): 1983 Reaff.2017
4	Turbidity, NTU	0.2	1	5	IS 3025 (Part - 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	150.9	250	1000	IS 3025 (Part - 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	432.4	200	600	IS 3025 (Part - 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	96.9	75	200	IS 3025 (Part - 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	46.2	30	100	IS 3025 (Part - 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	686.0	500	2000	IS 3025 (Part - 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	174.2	200	400	IS 3025 (Part - 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	5.1	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.4	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.16	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part - 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	BDL	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part - 49): 1994 Reaff 2019

*[Signature]*  
25/02/21  
Verified by

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25/02/21  
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#### M/s. Karnataka Industrial Areas Development Board (KIADB).

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00199
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00199
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near Hulugondanahalli Village.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	3.1	-	-	APHA 23 <sup>rd</sup> Edition

Note: BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

Remarks: The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

*[Signature]*  
25/02/21  
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### TEST REPORT



#### M/s. Karnataka Industrial Areas Development Board (KIADB).

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Karnataka 560 001.

Report No. : RE/2021/00200

Report date : 25/02/2021

Reference : Test Request Form

Sample receipt date : 13/02/2021

Job Order No : RE/2021/00200

Date of Sampling : 13/02/2021

Analysis start date : 15/02/2021

Analysis completion date : 25/02/2021

Sample Qty: 2 Ltrs

Sampling Protocol : E/WP/65

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near Heddidarmetlu Village.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part - 5): 1983 Reaff.2018
3	pH Value	7.7	6.5 - 8.5	No relaxation	IS 3025 (Part - 11): 1983 Reaff.2017
4	Turbidity, NTU	0.3	1	5	IS 3025 (Part - 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	109.8	250	1000	IS 3025 (Part - 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	311.3	200	600	IS 3025 (Part - 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	79.6	75	200	IS 3025 (Part - 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	27.3	30	100	IS 3025 (Part - 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	536.0	500	2000	IS 3025 (Part - 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	75.1	200	400	IS 3025 (Part - 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	6.6	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.4	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.15	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part - 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	1.30	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part - 49): 1994 Reaff 2019

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### TEST REPORT

<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00200
	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00200
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
<b>Sample Qty: 2 Ltrs</b>	Analysis completion date	: 25/02/2021
	Sampling Protocol	: E/WP/65
<b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
<b>Sample Particulars:</b> One sample of Borewell Water - Near Heddidarmetlu Village.		

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	2.9	-	-	APHA 23 <sup>rd</sup> Edition

**Note:** BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

**Remarks:** The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

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	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00201
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 2 Ltrs	Sampling Protocol	: E/WP/65
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One sample of Borewell Water - Near Devarakagalahalli Village.		

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	7.53	6.5 – 8.5	No relaxation	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	0.1	1	5	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	172.8	250	1000	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	406.4	200	600	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	114.2	75	200	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	29.4	30	100	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	766.0	500	2000	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	76.5	200	400	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	5.1	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.24	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.06	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	0.11	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part – 49): 1994 Reaff 2019

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## TEST REPORT

<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00201
	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00201
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
<b>Sample Qty: 2 Ltrs</b> <b>Name of the Industrial Area:</b> Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A) <b>Sample Particulars:</b> One sample of Borewell Water - Near Devarakagalahalli Village.	Analysis completion date	: 25/02/2021
	Sampling Protocol	: E/WP/65

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	3.3	-	-	APHA 23 <sup>rd</sup> Edition

**Note:** BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

**Remarks:** The given water sample complies to IS: 10500-2012 specification for above tested parameters.

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Report No.	: RE/2021/00202
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00202
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Lake Water - Near Devarakaggalahalli.

Sl. No.	Tests	Results	Protocol
Description: Colorless liquid.			
1	Color (hazen units)	<2.0	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	8.3	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	12.2	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	219.5	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	250.8	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	53.7	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	28.3	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	780.0	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	57.1	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	25.3	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.4	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.45	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	BDL	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	IS 3025 (Part – 49): 1994 Reaff 2019

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	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00202
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 2 Ltrs	Sampling Protocol	: E/WP/65
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One sample of Lake Water - Near Devarakagalahalli..		

Sl. No.	Tests	Results	Protocol
17	Chromium as Cr, mg/L	BDL	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	3.1	APHA 23 <sup>rd</sup> Edition

**Note:** BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

**Remarks:** The given water sample complies to IS: 10500-2012 specification for above tested parameters.

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	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00203
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 2 Ltrs	Sampling Protocol	: E/WP/65
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One sample of Borewell Water - Near Bannikuppe Village.		

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	8.4	6.5 – 8.5	No relaxation	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	11.2	1	5	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	82.3	250	1000	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	194.6	200	600	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	39.8	75	200	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	23.1	30	100	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	344.0	500	2000	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	15.1	200	400	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	1.3	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.3	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.18	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	0.08	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part – 49): 1994 Reaff 2019

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	Report date	: 25/02/2021
	Reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00203
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 2 Ltrs	Sampling Protocol	: E/WP/65
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One sample of Borewell Water - Near Bannikuppe Village.		

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	2.7	-	-	APHA 23 <sup>rd</sup> Edition

**Note:** BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

**Remarks:** The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

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Report No.	: RE/2021/00204
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00204
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

**Sample Qty: 2 Ltrs**

**Name of the Industrial Area:** Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

**Sample Particulars:** One sample of **Borewell Water - Near Cheeluru village.**

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	8.1	6.5 – 8.5	No relaxation	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	3.2	1	5	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	141.8	250	1000	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	276.7	200	600	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	50.2	75	200	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	36.7	30	100	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	522.0	500	2000	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	55.6	200	400	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	3.4	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.4	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	0.19	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	BDL	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part – 49): 1994 Reaff 2019

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### TEST REPORT

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Karnataka 560 001.

Report No.	: RE/2021/00204
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00204
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near Cheeluru village.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	3.5	-	-	APHA 23 <sup>rd</sup> Edition

Note: BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

Remarks: The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

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Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No. : RE/2021/00205  
Report date : 25/02/2021  
Reference : Test Request Form  
Sample receipt date : 13/02/2021  
Job Order No : RE/2021/00205  
Date of Sampling : 13/02/2021  
Analysis start date : 15/02/2021  
Analysis completion date : 25/02/2021  
Sampling Protocol : E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near KPTCL Station- 3rd phase-Project Site.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
<b>Description:</b> Colorless liquid.					
1	Color (hazen units)	<2.0	5	15	IS 3025 (Part- 4): 1983 Reaff.2017
2	Odour	Agreeable	Agreeable	Agreeable	IS 3025 (Part – 5): 1983 Reaff.2018
3	pH Value	7.8	6.5 – 8.5	No relaxation	IS 3025 (Part – 11): 1983 Reaff.2017
4	Turbidity, NTU	0.8	1	5	IS 3025 (Part – 10): 1984 Reaff.2017
5	Chloride as Cl, mg/L	210.4	250	1000	IS 3025 (Part – 32): 1988 Reaff.2019
6	Total hardness as CaCO <sub>3</sub> , mg/L	527.5	200	600	IS 3025 (Part – 21): 2009 Reaff.2019
7	Calcium as Ca, mg/L	129.8	75	200	IS 3025 (Part – 40): 1991 Reaff.2019
8	Magnesium as Mg, mg/L	49.3	30	100	IS 3025 (Part – 46): 1994 Reaff.2019
9	Total dissolved Solids, mg/L	728.0	500	2000	IS 3025 (Part – 16): 1984 Reaff.2017
10	Sulphate as SO <sub>4</sub> , mg/L	97.2	200	400	IS 3025 (Part – 24): 1986 Reaff.2019
11	Nitrate as NO <sub>3</sub> , mg/L	0.7	45.0	No relaxation	APHA 23 <sup>rd</sup> Edition
12	Fluoride as F, mg/L	0.3	1.0	1.5	APHA 23 <sup>rd</sup> Edition
13	Iron as Fe, mg/L	BDL	0.3	No relaxation	APHA 23 <sup>rd</sup> Edition
14	Lead as Pb, mg/L	BDL	0.01	No relaxation	IS 3025 (Part – 47): 1994 Reaff 2019
15	Copper as Cu, mg/L	BDL	0.05	1.5	APHA 23 <sup>rd</sup> Edition
16	Zinc as Zn, mg/L	BDL	5	15	IS 3025 (Part – 49): 1994 Reaff 2019

*[Signature]*  
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**Note:** 1. The results listed refer only to the tested samples and applicable parameters. 2. Test certificate should not be reproduced except in full, without written approval of the laboratory. 3. The submitted samples are drawn by the laboratory unless otherwise specified. 4. Endorsement of product is neither inferred nor implied. 5. Samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified. 6. This report cannot be used as evidence in the court of law & should not be used in any advertising media without our permission in writing. 7. Total liability of our lab is limited to the invoice amount and any disputes arising out of this report are subject to Bangalore jurisdiction only. 8. Laboratory is not responsible for the authenticity of photocopied test reports.



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No. 94, 2nd Floor, Thirumala Complex, Nagarabhavi Main Road, NGEF Layout,  
Nagarabhavi, Bengaluru - 560 072. Tel : 080 2318 6230

Email : info@robustmaterials.com Website : www.robustmaterials.com

### TEST REPORT

#### M/s. Karnataka Industrial Areas Development Board (KIADB).

No.49, 4th & 5th Floor, East Wing, Khaniya Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00205
Report date	: 25/02/2021
Reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00205
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/65

Sample Qty: 2 Ltrs

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One sample of Borewell Water - Near KPTCL Station- 3rd phase-Project Site.

Sl. No.	Tests	Results	Maximum Desirable Limit IS 10500: 2012	Maximum Permissible Limit IS 10500: 2012	Protocol
17	Chromium as Cr, mg/L	BDL	0.05	No relaxation	APHA 23 <sup>rd</sup> Edition
18	Dissolved oxygen, mg/L	3.1	-	-	APHA 23 <sup>rd</sup> Edition

Note: BDL for Cr: 0.05, Fe: 0.05, Pb:0.01, Zn:0.05, SO<sub>4</sub>: 5.0, NO<sub>3</sub>:5.0, F:0.1.

Remarks: The given water sample complies to IS: 10500-2012 specification for above tested parameters.

-----END OF THE REPORT-----

*[Signature]*  
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25/02/21  
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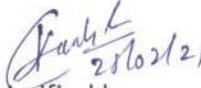
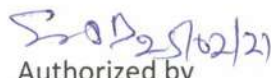
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**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00206
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00206
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Hulugondanahalli Village.		

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	7.9	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu\text{mhos/cm}$	210.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	485.1	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	7.84	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	3.53	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	477.1	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	348.0	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             Verified by         </div> <div style="text-align: center;">             Authorized by         </div> </div>			
Page 1 of 2			

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**TEST REPORT**

**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00206
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00206
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

Sample Qty: 1kg

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One Soil Sample- Near Hulugondanahalli Village.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	7.6	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.009	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	5.3	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	14.7	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	24.14	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	49.43	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	66.39	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	10.64	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	39.57	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

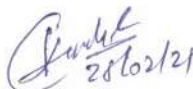
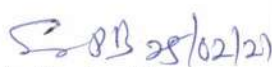
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**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00207
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00207
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Heddidarmetlu Village.		

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	8.4	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	202.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	327.6	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	6.14	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	3.45	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	420.0	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	205.2	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">   <b>Verified by</b> </div> <div style="text-align: center;">   <b>Authorized by</b> </div> </div>			
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**TEST REPORT**

**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00207
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00207
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

Sample Qty: 1kg

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One Soil Sample- Near Heddidarmetlu Village.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	5.7	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.01	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	3.8	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	16.6	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	16.99	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	16.45	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	54.74	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	7.70	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	17.91	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

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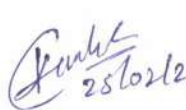
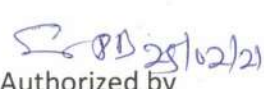
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**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00208
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00208
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Girenahalli Village.		

Sl. No.	Test	Result	Protocol
<b>Description:</b> Brown Colored Soil.			
1	pH (20% Suspension)	8.5	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	244.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	311.4	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	0.69	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	3.47	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	795.2	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	396.0	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             Verified by         </div> <div style="text-align: center;">             Authorized by         </div> </div>			
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**TEST REPORT**

<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00208
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00208
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Girenahalli Village.		

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	9.4	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.012	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	6.0	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	46.9	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	23.93	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	95.97	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	33.79	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	28.10	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	57.38	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

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*[Signature]*  
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Email : info@robustmaterials.com Website : www.robustmaterials.com

### TEST REPORT



#### M/s. Karnataka Industrial Areas Development Board (KIADB).

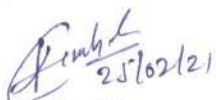
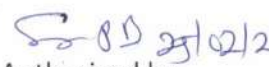
No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00209
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00209
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

Sample Qty: 1kg

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One Soil Sample- Near Devarakaggalahalli Village.

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	7.34	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	210.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	343.9	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	5.9	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	0.93	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	369.1	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	139.2	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             Verified by         </div> <div style="text-align: center;">             Authorized by         </div> </div>			

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**TEST REPORT**

**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00209
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00209
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

**Sample Qty: 1kg**

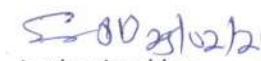
**Name of the Industrial Area:** Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

**Sample Particulars:** One Soil Sample- Near Devarakagalahalli Village.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	8.1	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.009	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	4.7	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	20.3	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	16.52	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	42.00	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	26.69	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	11.47	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	21.45	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

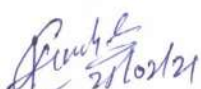
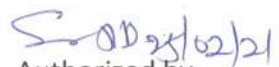
  
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**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00210
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00210
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Kalegowdanadoddi Village.		

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	7.61	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	208.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	298.8	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	9.8	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	1.21	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	492.5	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	120.0	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">   <b>Verified by</b> </div> <div style="text-align: center;">   <b>Authorized by</b> </div> </div>			
Page 1 of 2			

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**TEST REPORT**

**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00210
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00210
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

**Sample Qty: 1kg**

**Name of the Industrial Area:** Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

**Sample Particulars:** One Soil Sample- Near Kalegowdanadoddi Village.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	11.3	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.011	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	5.9	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	45.5	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	29.85	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	52.92	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	35.83	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	12.75	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	22.86	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

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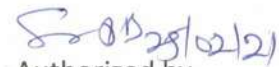
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**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00211
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00211
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Vaderahalli Village.		

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	7.47	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	150.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	293.7	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	1.2	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	7.5	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	534.1	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	205.2	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             Verified by         </div> <div style="text-align: center;">             Authorized by         </div> </div>			
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**TEST REPORT**

**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00211
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00211
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

Sample Qty: 1kg

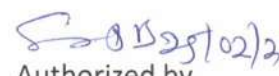
Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One Soil Sample- Near Vaderahalli Village.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	5.5	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.013	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	3.86	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	23.8	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	27.38	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	49.34	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	42.48	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	29.55	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	37.45	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

  
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**TEST REPORT**



**M/s. Karnataka Industrial Areas Development Board (KIADB).**

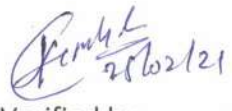
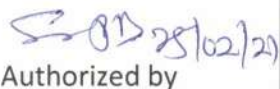
No.49, 4th & 5th Floor, East Wing, Khaniya Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00212
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00212
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

**Sample Qty: 1kg**

**Name of the Industrial Area:** Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

**Sample Particulars:** One Soil Sample- Near Cheeluru Village.

Sl. No.	Test	Result	Protocol
<b>Description:</b> Brown Colored Soil.			
1	pH (20% Suspension)	7.1	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	110.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	232.5	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	8.0	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	3.4	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	432.4	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	72.0	Practical Manual for Hands on training GKV Bengaluru
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**TEST REPORT**

<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00212
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00212
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near Cheeluru Village.		

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	4.1	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.011	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	3.9	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	28.1	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	39.65	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	244.59	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	26.88	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	29.08	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	62.36	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----


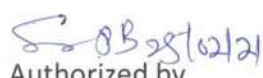
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Authorized by

**TEST REPORT**



<b>M/s. Karnataka Industrial Areas Development Board (KIADB).</b> No.49, 4th & 5th Floor, East Wing, Khanija Bhavan, Race Course Road, Bengaluru, Karnataka 560 001.	Report No.	: RE/2021/00213
	Report date	: 25/02/2021
	reference	: Test Request Form
	Sample receipt date	: 13/02/2021
	Job Order No	: RE/2021/00213
	Date of Sampling	: 13/02/2021
	Analysis start date	: 15/02/2021
	Analysis completion date	: 25/02/2021
Sample Qty: 1kg	Sampling Protocol	: E/WP/77
Name of the Industrial Area: Harohalli Industrial Area, 2 <sup>nd</sup> & 3 <sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)		
Sample Particulars: One Soil Sample- Near KPTCL Station- Project Site.		

Sl. No.	Test	Result	Protocol
Description: Brown Colored Soil.			
1	pH (20% Suspension)	6.59	Practical Manual for Hands on training GKV Bengaluru
2	Conductivity, $\mu$ mhos/cm	86.0	Practical Manual for Hands on training GKV Bengaluru
3	Chloride as Cl, mg/Kg	480.4	Practical Manual for Hands on training GKV Bengaluru
4	Moisture, %	1.8	Practical Manual for Hands on training GKV Bengaluru
5	Organic Matter, %	1.18	Practical Manual for Hands on training GKV Bengaluru
6	Calcium as Ca, mg/Kg	20.9	Practical Manual for Hands on training GKV Bengaluru
7	Magnesium Mg, mg/Kg	396.0	Practical Manual for Hands on training GKV Bengaluru
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="text-align: center;">             Verified by         </div> <div style="text-align: center;">             Authorized by         </div> </div>			
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**M/s. Karnataka Industrial Areas Development Board (KIADB).**

No.49, 4th & 5th Floor, East Wing, Khanija Bhavan,  
Race Course Road, Bengaluru,  
Karnataka 560 001.

Report No.	: RE/2021/00213
Report date	: 25/02/2021
reference	: Test Request Form
Sample receipt date	: 13/02/2021
Job Order No	: RE/2021/00213
Date of Sampling	: 13/02/2021
Analysis start date	: 15/02/2021
Analysis completion date	: 25/02/2021
Sampling Protocol	: E/WP/77

Sample Qty: 1kg

Name of the Industrial Area: Harohalli Industrial Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase, Ramanagara District, Karnataka. (Ext- 1688.28 A)

Sample Particulars: One Soil Sample- Near KPTCL Station- Project Site.

Sl. No.	Test	Result	Protocol
8	Colour	Brown	Practical Manual for Hands on training GKV Bengaluru
9	Sulphur as S, mg/Kg	8.7	Practical Manual for Hands on training GKV Bengaluru
10	Nitrogen as N, %	0.01	Practical Manual for Hands on training GKV Bengaluru
11	Phosphorous as P, mg/Kg	6.6	Practical Manual for Hands on training GKV Bengaluru
12	Potassium as K, mg/Kg	25.4	Practical Manual for Hands on training GKV Bengaluru
13	Copper as Cu, mg/Kg	32.24	Practical Manual for Hands on training GKV Bengaluru
14	Chromium as Cr, mg/Kg	87.30	Practical Manual for Hands on training GKV Bengaluru
15	Zinc as Zn, mg/Kg	58.37	Practical Manual for Hands on training GKV Bengaluru
16	Lead as Pb, mg/Kg	34.47	Practical Manual for Hands on training GKV Bengaluru
17	Nickel as Ni, mg/Kg	50.84	Practical Manual for Hands on training GKV Bengaluru
18	Cadmium as Cd, mg/Kg	<0.05	Practical Manual for Hands on training GKV Bengaluru

-----END OF THE REPORT-----

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**Proceedings of the Environmental Public Hearing held on 23.12.2016, 11-00 AM in connection with the proposed Harohalli Indl. Area, 2<sup>nd</sup> & 3<sup>rd</sup> Phase by Karnataka Industrial Area Development Board, Kanakapura Tq, Ramanagara District.**

1.	Place of Environmental Public Hearing	Proposed Project Area, KIADB 3 <sup>rd</sup> Phase, Near Kavitha Farm, Jakkasandra-Cheelur Road, Harohalli Hobli, Kanakapura Tq, Ramanagara Dist.
2.	Presiding Officer	Dr. B.R.Mamatha, IAS Deputy Commissioner, Ramanagara
3.	Representative of KSPCB	Sri. N.Lakshman, Senior Environmental Officer, Zonal Office, Bangalore-South
4.	Officers Present	<ol style="list-style-type: none"> <li>1. Dr. Prashanth, Addl. DC, Ramanagara</li> <li>2. Sri. Honmane, JD, DIC, Ramanagara</li> <li>3. Sri. Yoganand, Tahasildhar, Kanakapura</li> <li>4. Sri. Siddaramaiah, EO, Regional Office, KSPCB, Ramanagara</li> <li>5. Sri. Lokesh H.K, DEO, Regional Office, KSPCB, Ramanagara</li> <li>6. Smt. M.S.Nethravathi, AEO, Regional Office, KSPCB, Ramanagara</li> <li>7. Sri. Shivalingaiah, AD, DIC, Ramanagara</li> </ol>
5.	KIADB Representatives present	<ol style="list-style-type: none"> <li>1. Sri. Syed Iftekar Ahmed, DO &amp; EE-1</li> <li>2. Sri. K.Jagannath, Dy. DO &amp; AEE-2</li> <li>3. Sri. Chandrashekaraiyah, KAS, SLAO-1</li> <li>4. Sri. D.Venkatesh, AE</li> <li>5. Sri. Srikanth M.Y, AE</li> <li>6. Sri. Sunilkumar T.H - AE</li> </ol>
6.	Public Present	Attendance enclosed

Karnataka Industrial Area Development Board (KIADB) has proposed to develop industrial area of 919.01 Acres of 2<sup>nd</sup> Phase and 1316.90 Acres of 3<sup>rd</sup> Phase within the village limits of Harohalli, Medamaranahalli, Hulugondanahalli, Bannikuppe, Devarakaggalahalli, Jakkasandra and Cheelur. The KIADB has applied for Environment Clearance as per the EIA Notification 2006 of the Ministry of Environment, Forest and Climate Change, GOI. The MoEF & CC has issued Terms of Reference (TOR) vide letter F-No.21-142/2015-IA.III Dated 1.02.2016 and informed Karnataka State Pollution Control Board to conduct Public Hearing and submit the proceedings.

As per the requirements of the EIA Notification, the Karnataka State Pollution Control Board had issued paper notification on 23.11.2016 in leading news papers The Hindu (English) and

Prajavani (Kannada). Paper Notification was also issued in local leading news paper Ramanagara Varthe on 7.12.2016 for wide publicity to facilitate stake holders such as local residents, environmentalists, public who are likely to be affected directly or indirectly by the project to submit their objections, suggestions, advice etc., through E-mail/in writing to the Karnataka State Pollution Control Board/Presiding Officer, Environmental Public Hearing Panel (Deputy Commissioner and District Magistrate, Ramanagara District) or orally during the Public Hearing. Further, copies of EIA Report and Executive summaries in Kannada & English were made available to the public at various offices in the District such as DC Office, Zilla Panchayath Office, DIC, CMC, Ramanagara, KSPCB, Regional Office and Village Panchayath, Harohalli.

As per the Environmental Impact Assessment Notification, 2006 the Public consultation was organized at Project site on 23.12.2016 at 11-00 AM under the chairmanship of Deputy Commissioner and District Magistrate, Ramanagara District in assistance with the representatives of Karnataka State Pollution Control Board.

Sri H.K Lokesh. Deputy Environmental Officer, KSPCB, Ramanagara informed the gathering that it is mandatory to consult public and the stake holders before issue of Environmental Clearance by the Ministry of Environment, Forest and Climate Change, GOI and welcomed the Presiding Officer the Deputy Commissioner and District Magistrate Dr. B.R.Mamatha, IAS, Additional Deputy Commissioner Dr. Prashanth, KAS and Senior Environmental Officer, KSPCB, Sri. N.Lakshman. He also welcomed the officials of KIADB, officials from different departments, public, media persons, factory representatives and explained the purpose and need for conducting public consultation. He also informed the public to express their views on the proposed development of industrial area after the power point presentation of the proposed project by the consultants of KIADB, M/s. Ramky Enviro Engineers Ltd, Bangalore.

Dr. Hemanth Rajkumar of Ramky Enviro Engineers Ltd made power point presentation about the proposed project. He informed that the project is being developed adjacent to National Highway and the land belonging to seven villages i.e. Harohalli - 362 acres, Medamaranahalli - 100 acres, Hulugondanahalli - 139 acres, Bannikuppe - 524 acres, Devarakaggalahalli - 125 acres, Jakkasandra - 190 acres and Cheelur - 684 acres, totaling to 2235 acres is being acquired.



The land use pattern in 2<sup>nd</sup> stage consists of 550.13 Acres for industrial area, 45.86 Acres for amenities, 90.96 Acres for parks, 49.42 Acres for buffer, 19.37 acres for parking and 163.26 acres for roads. In 3<sup>rd</sup> stage 700.10 Acres will be utilized for industrial area, 41.14 Acres for amenities, 120.18 Acres for parks, 141.06 Acres for buffer, 96.96 acres for parking and 147.04 acres for roads. The copy of the presentation is attached. He informed the public that the development of industrial area results in improved socio-economic status, provides more employment opportunities, the infrastructure like roads, educational institutions, hospitals, community centers, post office, bank, industrial training institutes, street lights, water supply, sewerage system and other indirect benefits to the surrounding villages. Environmental status of the area has been analysed in a radius of 10 kilometers and the attributes like Particulate matter, Sulphur Dioxide, Oxides of Nitrogen are well within the limits prescribed by the CPCB. Ten ground water samples and two surface water samples have been analysed and ground water exhibits slightly higher values of dissolved salts, fluoride and hardness at some locations. Water requirement for the project is around 11.3 MLD which will be met through fresh water-6.3 MLD and treated wastewater- 5.0 MLD. Individual industries will provide treatment plants and air pollution control measures as prescribed by the Karnataka State Pollution Control Board and there will not be any pollution problems. Separate site will be provided in the industrial area for solid waste management. He informed that the project is totally beneficial to the local public, industries and the Government.

After the presentation, the Environmental Officer C.Siddaramaiah, requested the public gathered in the meeting to submit their representations/objections/ grievances/advice on environmental issues related to the project being development by KIADB. Accordingly, following persons expressed their views.

**Siddappa, Hulisiddanadoddi :** He stated that local people have not opposed industrial area development but he insisted the authorities to ensure no illegal disposal of effluents to the lakes or ponds adjacent to the industrial area. He also expressed that as far as possible the existing greenery shall be retained in addition to the proposed afforestation. He expressed the concern about local employment for land losers based on their education, skill etc., He also spoke about disparity in compensation to the land losers and also suggested proper regulation of air emissions and effluents likely to be generated from the upcoming industrial units.



**Ravigowda, Jakkasandra :** He stated that public have no information about public hearing and had the authorities given wide publicity about this programme, more local people would have shared much information about local environmental issues.

**Muniraj, President Raita Sangha:** He spoke about compensation issues and local people suffering due to existing industrial activities and requested the KIADB authorities to pay proper compensation to the land losers. He informed that Suvarnamukhi River has been polluted and there is crop loss due to irrigation by this polluted water. He also stated that there was illegal disposal of effluents to the river at Chikkakurubarahalli, resulting in fish kill and the same was reported in the news paper, but there was no action initiated in spite of public protest. He cautioned that, such incidents should not be repeated and the authorities should take proper care. He also told that KIADB have acquired land till the village boundary and this will create public nuisance and health problems due to industrial pollution, noise etc. especially to the elderly and students and suggested to provide more buffer area between village limits and industrial area.

**Kote Kumar, District President, Samatha Sainika Dala:** He congratulated the organizers of the public hearing programme and expressed that more existing industrial unit representatives should have present to listen the environmental problems faced by the local people. He stated that the authorities should take the initiative to display Boards at each industry, having information about the conditions imposed on the pollution prevention measures to be provided by the industry. The details of concerned officer shall also be given in the display board to enable public to give complaint in case of any illegal disposal, pollution problems etc., He also suggested to form a co-ordination committee consisting of local people, public representatives and government officials to discuss about environmental issues and to oversee the local employment issues etc., as the industries will not allow any public/public representatives to enter their industry to verify any pollution problems.

**Jagadeesh, Bannikuppe:** He stated that, in the existing 1<sup>st</sup> and 2<sup>nd</sup> phase industrial area, employment is not given to local people and to consider this aspect in the proposed industrial area. He also expressed that, at present some of the industrial units are disposing the waste illegally and public are facing dust and odor nuisance problems from the tyre pyrolysis industries and requested to control the same.



**Nagaraju, Zilla Panchayat Member:** He spoke about the land compensation issues and informed that no reservation is given in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> phase of industrial area. He insisted to consider 25% reservation of plots to SC/ST people in future KIADB developed industrial projects. He requested the KIADB authorities to clear the pending payments of the land losers.

**In response to the above queries/suggestions by the public, the officials gave following clarifications;**

**C.Siddaramaiah, Environmental Officer, KSPCB** assured that no industry will be spared in case if it is found to be violating the Pollution Control Acts and Rules and action will be initiated. He stated that, the co-operation of the public is also important to identify the defaulters and requested the public to inform the Board whenever there are any discharge of effluents in to water body or dumping of waste illegally.

**Syed Ifthekar Ahmed, Development Officer, KIADB:** He stated that KIADB and District Administration, Ramanagara have taken initiative to provide facilities such as fire station, park, hospital etc. in the surrounding villages of Harohalli Industrial Area. He also informed that 200 acres area has been identified in the surrounding area for establishing All India Institute of Medical Sciences (AIIMS). He expressed that the public grievances such as compensation issues, local employment etc. will be addressed through Single Window Agency meetings. Regarding the issue of Panchayath license to the industrial units, he clarified that the industries are required to obtain license from the concerned village panchayath by paying the necessary license fee. He stated that KIADB is imposing conditions in the lease cum sale agreement regarding the same. He also informed the public that a buffer of 250 mtr from the village boundary to the industrial area boundary will be provided.

**Sri Honmane, Joint Director, DIC, Ramanagara:** He informed that, a survey is in progress for collecting the information about local unemployment, available skilled and unskilled labours, employment opportunities in the existing industries and also jobs given by the industries at present. He appealed to the public to furnish the details of unemployed youths, their education, training requirement etc to enable discussions with the industrial units and to facilitate employment to the local youths.

**Sri. Chandrashekaraiah, KAS, Special Land Acquisition Officer, KIADB:** He stated that, w.r.t. 2<sup>nd</sup> and 3<sup>rd</sup> phase, Harohalli Indl. Areas, compensation has been paid to the land losers who

had clear titles and also in some of the cases deposits have been made to the court to settle the disputes with the land losers.

While summing up the issues raised by the public, **Dr. B.R.Mamatha, IAS, Deputy Commissioner, Ramanagara** informed the public that, District Administration will strictly implement Sarojini Mahishi report regarding employment to the local people. She also said that survey is under progress for identification of available skilled and unskilled people and establishment of vocational training institution in Harohalli Industrial Area. She spoke about implementation of welfare measures in the surrounding villages through Corporate Social Responsibility (CSR) by the existing and upcoming industrial units. She expressed that, as the natural resources such as water, air, land etc., being utilized by the industrial units, it is their duty to involve in the development of local community. She also stated that, as per GOI notified CSR Regulations, 2013, it is mandatory for the industries to spend 2% of their profit for community development. She stated that, CSR fund may be used for installation of RO plants for providing clean drinking water, construction of schools, roads and other community developments. She reiterated that, the District Administration will involve in the mapping process of the required facility development activities to utilize CSR funds. She appealed to the public to provide information about illegal disposal of wastes, effluents etc. by the industries and assured the public that stern action will be initiated against such industries.

The Environmental Officer, KSPCB, summarized the views expressed during the meeting and he informed that opinions expressed are recorded and the proceedings will be forwarded to the Ministry of Environment, Forest and Climate Change through State Pollution Control Board for consideration while issuing the Environmental Clearance Certificate.

The Public Hearing was ended with vote of thanks.

**Suggestions by the Chairman, Public hearing panel;** After hearing the public, the following suggestions have been made to the Ministry of Environment, Forest and Climate Change, GOI.

1. Proper zoning of different categories of industries like pharmaceutical, chemical, waste re-processors etc, should be done, so that implementing pollution control measures becomes easy and economical.
2. A separate zone should be provided for waste re-processors (where implementing complete pollution control measures is costly and less economical for them) with thick



buffer zone of green belt around them so that there will not be pollution problems to other industries and public.

3. Sufficient buffer zone with thick green belt should be developed towards villages so that the villagers do not face any pollution problem from the industries. Since the second phase of Industrial area has already been developed, the KIADB shall develop sufficient buffer zone towards villages by de-allotting the already allotted vacant plots.
4. The water bodies coming within the industrial area should be developed with sufficient buffer and fenced to prevent any illegal disposal of industrial solid waste/effluents.
5. The proposed industrial area should be developed with common facility for scientific management of liquid waste, solid waste, hazardous waste and other waste especially from small scale units without creating pollution/nuisance to the surrounding villages.
6. A separate fund shall be maintained by collecting some percentage of total cost of industrial plots as well as CSR fund from individual industries. The same shall be utilized for providing basic facilities like infrastructure, potable water supply with RO plants, sewerage system, solar lighting, community programmes etc., in the surrounding villages. A committee headed by Deputy Commissioner and representatives of KIADB, KSPCB, District Industries Centre, Social Welfare Department, etc., should be constituted to spend the above fund.
7. After the development of Phase-2 and Phase-3, Harohalli Industrial Area becomes one of the biggest industrial areas in the country. Hence, the Karnataka State Pollution Board should establish exclusive Regional Office at Harohalli Industrial Area.

Dr. B.R.Mamatha, IAS  
Chairman, Public Hearing Panel  
Deputy Commissioner & District Magistrate  
Ramanagara District