



# 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

KIADB/JDTP/FCN:20456/401/2021-22

Date: 13-01-2022

To,

**State Level Environment Impact Assessment Authority (SEIAA)**

Room No. 706, 7th Floor,

4th Gate, M. S. Building,

Bengaluru -560001, Karnataka.

Sir,

**Subject:** Submission of Half yearly point wise Environmental Compliance report for all the conditions stipulated in the Environmental Clearance issued with respect to Establishment of Vemagal Industrial Area, KIADB at Villages of Kuragal, Harjenahalli, Perjenahalli and Singihalli of Vemagal Taluk, Kolar District by Karnataka to an extent of 666.41 Acres.

- Ref.:**
1. Environmental Clearance reference no.: No. SEIAA 29 IND 2012 dated 20<sup>th</sup> September, 2014.
  2. General Condition imposed in the Environmental Clearance for submission of Half yearly Compliance @ Condition No. 4.
  3. This Office first Half-yearly compliance report No.5693 dated:13-08-2021.

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With reference to above subject, it is to be informed that SEIAA has issued Environmental Clearance for Establishment of Vemagal Industrial Area, KAIDB at Villages of Kuragal, Harjenahalli, Perjenahalli and Singihalli of Vemagal Taluk, Kolar District by Karnataka to an extent of 666.41 Acres, after finalizing the ToR and after conducting the public hearing.

In the said Environmental Clearance at the General Condition No. 4, it is stipulated that KIADB has to submit half yearly compliance report to all the conditions stipulated in the EC issued on 20.09.2014. Earlier on 13-08-2021, KIADB has submitted 1<sup>st</sup> Half-yearly compliance report as per the condition of EC.

Hence, the 2<sup>nd</sup> Half-yearly detailed point wise compliance report to all the conditions stipulated in the Environmental Clearance issued to Vemagal Industrial Area is being submitted to SEIAA and the same is attached for your kind perusal for information in the form of soft copy.

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 Development of Vemagal Industrial Area at Villages of Kuragal, Harjenahalli, Perjenahalli and Shingihalli of Vemagal Taluk, Kolar District by Karnataka- 2<sup>nd</sup> Term.**

**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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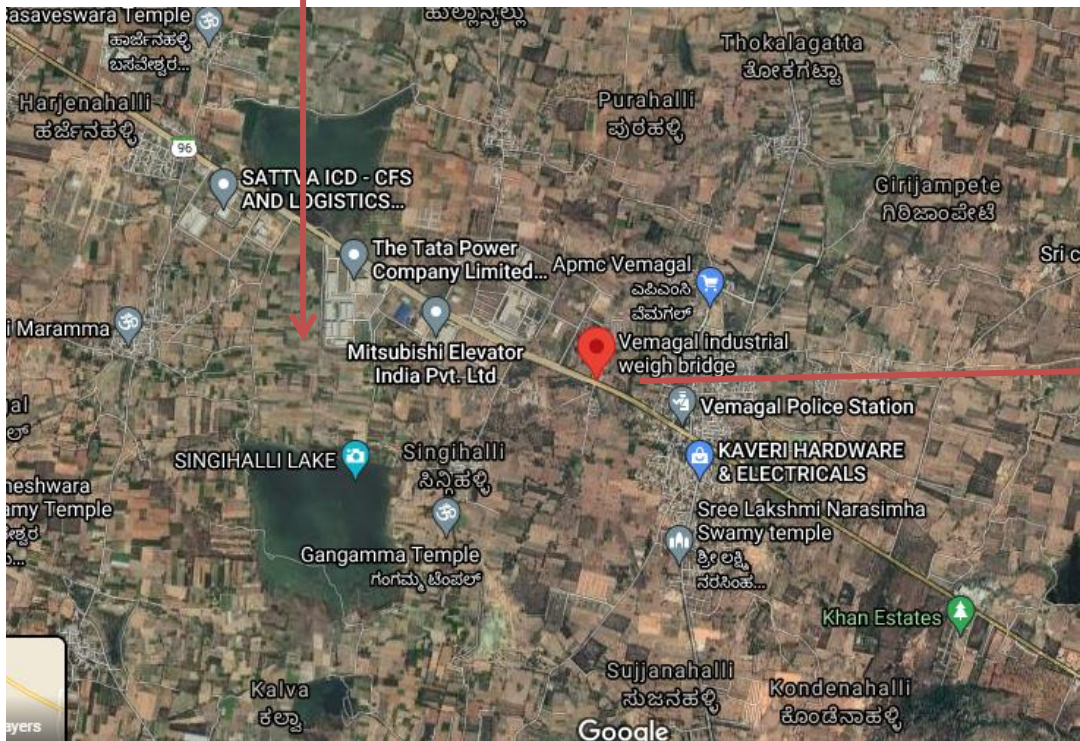
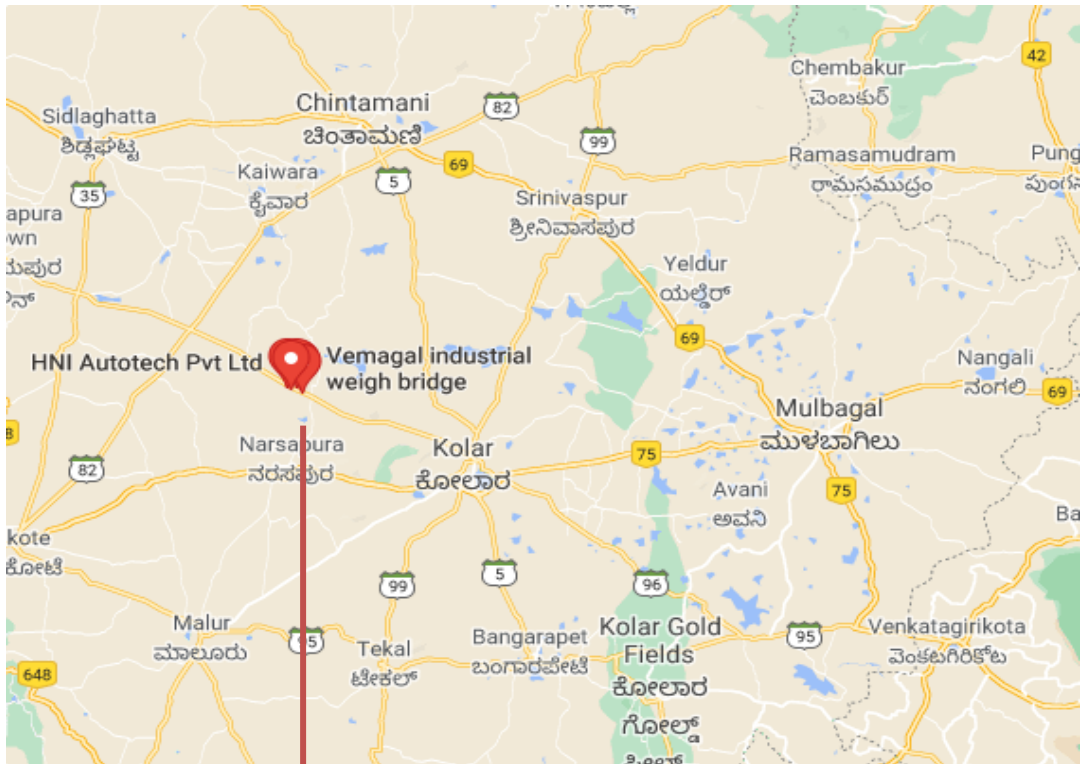
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## **1.0. PROJECT DETAILS:**

- 1) Name of the Project:** Development of Vemagal Industrial Area at Villages of Kuragal, Harjenahalli, Perjenahalli and Shingihalli of Vemagal Taluk, Kolar District by Karnataka.
- 2) Environmental Clearance reference no.:** No. SEIAA 29 IND 2012 dated 20th September, 2014.
- 3) Total Plot Area:** 269.69 Ha (666.41 Acres).
- 4) Category of Industries:** Orange and Green category.
- 5) Total Water requirement for the Industrial area:** 350 KLD for the domestic purpose is proposed to be met from the extraction of ground water and the estimated water demand of around 10 MLD for the industrial use is proposed to be met from the BWSSB tertiary treated water.
- 6) Total Power Requirement:** 2,850 KVA will be sourced from Karnataka Power Transmission Corporation Limited (KPTCL).
- 7) Schedule & Category:** 7 (C) & B category.
- 8) 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:



Vemagal  
Industrial  
Area, Kolar  
District.

**Fig.1:** Map showing Vemagal Industrial Area, Kolar District.



**3.0. Half Yearly Environmental Compliance Report for all the Conditions Stipulated in the Environmental Clearance issued with respect to Development of Vemagal Industrial Area at Villages of Kuragal, Harjenahalli, Perjenahalli and Singihalli of Vemagal Taluk, Kolar District by Karnataka. (Ext-666.41 Acres).**

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 for Establishment" shall be obtained from Karnataka State Pollution Control Board under Air and Water Act and a copy shall be submitted to the SEIAA, Karnataka before start of any construction at the site.	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, have been obtained on 30.01.2018. Copy has been submitted to SEIAA, Karnataka.
2	Set up an Environment Management cell with appropriate lab facility shall be created as the project starts. It shall monitor all necessary parameters and activities during construction and operational phases from day one. The cell also ensures that the cell manages / maintains all the environmental aspects such as sewage treatment, solid waste disposal, maintenance of green belt areas, etc.	Complied. KIADB has already setup an Environment management cell with necessary facilities and qualified personnel to look after the Environmental aspects to maintain all the environmental aspects such as sewage treatment, solid waste disposal, maintenance of green belt area etc.
3	All required sanitary and hygienic measures should be in place before starting construction activities and to be maintained throughout the construction phase. Sufficient number of toilets/bathrooms shall be provided with required mobile toilets, mobile STP for construction work force.	Complied. All necessary infrastructure facilities and basic sanitary facilities will be provided to the workers at the site during the construction phase of the industrial area.
4	A First Aid room should be provided in each of the three proposal project areas both during construction and operation of the Project.	Noted.
5	Adequate drinking water and sanitary facilities should be provided for construction workers at the site. The safe disposal of wastewater and solid wastes generated during the construction phase should be ensured.	Noted. All necessary infrastructure facilities and basic sanitary facilities will be provided for all the construction workers during the construction phase. The safe disposal of wastewater and solid wastes generated during the construction phase will be ensured as per the CFE conditions.

6	Provision shall be made for the housing of construction labourers within the site with all necessary infrastructures and facilities. The housing maybe in the form of temporary structures to be removed after the completion of the project. The facilities shall include the crèche.	Complied. Mostly construction labourers/ workers from the surrounding villages will be hired during the construction phase, so that it is not required to provide temporary housing and Temporary Labour camps will be provided with basic sanitary facilities and water supply.
7	Provision should be made for the supply of fuel (kerosene or cooking gas); utensils such as pressure cookers etc. to the labourers during construction phase.	Noted. Mostly construction labourers/ workers from the surrounding villages will be hired during the construction phase, so that it is not required to provide temporary housing. Required infrastructure facility will be provided to all the labourers during construction phase.
8	All the labourers to be engaged for constructions should be screened for health and adequately treated before engaging them to work at the site and detailed report submitted to SEIAA. Safety standards as per National Building Code (NBC) should be ensured.	Noted.
9	For dis-infection of wastewater which is not meant for recycling the for toilet flushing, use ultraviolet radiation and not chlorination. For treated wastewater meant for reuse for toilet flushing, disinfect by using chlorination.	Noted. During the operation phase of the industrial area, individual Industrial units will be informed to adopt these methods wherever possible for water conservation.
10	All the topsoil excavated during the construction activities should be stored for use in horticulture/ landscape development within the project site.	Complied. The topsoil excavated during the development stage will be used for landscaping, levelling and plantation purposes with in the project site.
11	Disposal of muck construction debris during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Noted. The construction debris will be 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.
12	Soil and ground water samples should be tested at the project site during the construction phase to ascertain that there is no threat to ground water quality by leaching of heavy metals and or other toxic contaminants and the reports should be submitted to SEIAA.	Noted. All necessary precautions will be taken to ensure that there is no contamination of soil and ground water.

13	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 after carrying out proper segregation of each category of waste and disposed scientifically, to prevent the contamination of the ground water.
14	The diesel generator sets to be used during construction phase should be low sulphur diesel type and should conform to Environment (Protection) Rules prescribed for air and noise emission standards.	Noted. The fuel used in individual DG sets used during construction phase will use low sulphur diesel and it is ensured that air and noise emissions will be within the prescribed norms, so that there was no disturbance created due to operation of DG sets. DG sets with acoustic enclosures only will be used to comply with the norms.
15	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.	Complied. All the required Necessary precautions will be 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 area are also advised to take necessary precautions and to obtain clearances from competent authority for the safe storage of diesel.
16	Vehicles hired for bringing construction material to the site should be in good condition and should conform to applicable air and noise emission standards and should be operated only during non-peak hours.	Individual vehicle owners will be directed to keep the hired vehicles in good condition and emission documents will be maintained by the vehicle owner which conforms to the prescribed standards and the workers will be 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.
17	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 construction phase. Adequate measures to reduce air and noise pollution during construction keeping in mind CPCB norms on noise limits.	Contractor & all the Construction workers at the Project site will be advised to take necessary precautions and measures to reduce the noise and air emission levels, contributed during construction and adequate measures will be taken to keep the emission within the stipulated standards.



18	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. As far as possible Fly ash will be used as building material during the construction phase. The individual Industrial units will be informed to strictly follow the provisions of Fly ash notification and use the fly ash products for building and construction purposes.
19	Ready mixed concrete must be used in building construction.	Noted.
20	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Noted.
21	Water demand during construction should be reduced by use of premixed concrete, curing agents and other best practices and only tertiary treated water shall be used for construction as per G.O. No. FEE 188 ENV 2003 dated 14.08.2003.	Noted.
22	No ground water is to be drawn without permission from the Central/ State Ground Water Authority.	Noted. Necessary permission will be taken by KIADB for digging new Borewell from Central Ground Water Authority and no ground water will be drawn without permission from the Central/ State Ground Water Authority. Also during the operation phase, industries will also be informed about the same.
23	Separation of grey and black water should be done by the use of dual plumbing line for separation of grey and black water.	Noted and Industries operating in the area will be informed to provide dual plumbing system wherever possible for efficient use of water.
24	Treatment of 100% grey water by decentralized treatment should be done.	Noted. The issue will not arise during the construction phase, during the operation phase, Individual industries will be treating the wastewater generated in the in-house Wastewater treatment plant installed as per the requirement and it is ensured that the treated water shall meet to prescribed norms notified by competent authority.
25	The provision of Energy Conservation Building code 2006 shall be fully complied with.	Noted and will be adapted wherever possible. During the operation phase, individual industries will be informed before allotting the plots, so as to comply with the Energy conservation measures as per ECBC, 2006 and its amendments.

26	Roof should meet prescriptive requirement as per Energy Conservation Building Code, 2007 by using appropriate thermal insulation material.	Noted and during the operation phase, Individual industries will be informed to adopt wherever possible as per ECBC, 2007 and its amendments.
27	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code, 2007 which is proposed to be mandatory for all air conditioned spaces while it is optional for non-air conditioned spaces by use of appropriate thermal insulation material to fulfil requirement.	Noted and during the operation phase, individual industries will be informed to adopt wherever possible.
28	The Proponent shall obtain the construction material such as stones and jelly etc. only from the approved quarries and other construction material shall also be procured from the authorized agencies/traders.	Complied. Construction materials such as stones, jelly and other construction material will be obtained from the approved quarries and construction materials shall also be procured from the authorized agencies/traders.
29	The project authority shall ensure that no water bodies are polluted due to project activities.	Noted. As suggested in the EC and industrial plots allotted in the Industrial area will be advised to take care of the water bodies as part of their Corporate Environment Responsibility. No alterations of natural drainage pattern will be done during the Project Construction activities. Sufficient buffer as per the zoning regulations of local bodies will be kept around the water bodies to prevent pollution of any water body and required area will be left untouched for natural conservation.
30	Safety standards as per National Building Code (NBC), 2005 should be followed and ensured.	Noted and will be followed.
31	The project Authorities shall ensure that the National Building Code, 2005 is complied with and adhered to.	Noted. Individual industries will also be advised to follow the same as per instructions in NBC, 2005 and its amendments.
32	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.	Agreed. No such land is used by KIADB for the project proposed and green belt is developed wherever possible.
33	The authorities should include the condition while issuing plots to the prospective individual industries that they should develop greenbelt of at least 33 % of the plot area.	Noted and greenbelt is developed as per the EC conditions and the condition will be included in the agreement during the allotment of plots for the projects.

34	The industrial units in the industrial area and the associated facilities shall be strictly in accordance with the norms laid down by the Karnataka State Government and KSPCB/CPCB.	Noted. Each industrial unit are advised to comply with the same. All industries shall follow the conditions & norms laid down by the Competent Authority.
35	The project authorities shall strictly adhere to the commitments made in the letter No. IADB/IDTP/EC/90/3479/2013-14 dated 04-06-2013 with regard to establishment of STP/CETP, buffer zone, green belt, conditions to be incorporated in the lease document while allotting plots to individual industries, environment safety aspects etc.	Agreed and complied as suggested with regard to establishment of STP/CETP, buffer zone, green belt. Each industrial unit was informed about the conditions with laid down with respect to Environment safety and protection and the conditions are incorporated in the lease document as well during the allotment of plots.
36	KIADB should allot the plots only for orange and green category industries in the proposed industrial area. If red category industry has to come up in the same industrial area, that particular industry requires taking a separate clearance from appropriate authorities	Agreed. No such land is allotted to Red Category industries except Orange and Green category industries. Any modifications with respect to allotment of red category industries in the EC obtained in industrial area will only be done after obtaining necessary approvals from the Competent Authority.
37	There should be fire stations in civic amenity sites provided in the layout taking into account the direction of wind as fire hazard industries are also to be located in safe zones not affecting any other immediate neighbourhood as per wind rose diagram.	Noted.
38	The existing water body, canals, drainages and any other structures shall be retained unaltered with due buffer zone of 15 meter around maintained under tree cover.	Noted. No alterations will be made in case of existing natural drainage patterns, water bodies, rajakaluve etc. and required distance of buffer zone are provided in the required areas.
39	The project authorities shall leave 30 mtrs buffer from the boundary of lake and 15 meters on either side of the channel / nala and other water bodies as per the BDA norms and this shall be free from any permanent structures. The buffer so maintained shall be planted with indigenous tree species such as Neem, AkashMallige, Mahagoni, Honge, KadambaFicus, etc. and maintained as green belt.	Noted. 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 adjoined roads of the project site. Also individual industrial units are also advised to maintain green belt for 33% of the allotted plot area as applicable.

40	The natural sloping pattern of the project site shall remain unaltered and the natural hydrology of the area be maintained as it is to ensure natural flow of storm water.	Noted. No alterations to natural drainage pattern will be done during the Project Construction activities.
41	Lakes and other water bodies within and/or at the vicinity of the project area shall be protected and conserved.	Noted. All the required protective/ conservative measures are taken so that there will be no harm to the natural environment which is existing before the project.
42	The project Authorities shall undertake activities towards the Corporate Social Commitment Plan made vide letter dated 22nd February 2013 with a total budget not less than Rs.14 Lakhs and shall be executed within a period of 2012- 2017 as committed and report be submitted to the Authority.	Noted. The suggestions/observations and concerns made during the public hearing will be duly considered and all required measures are being taken to improve the socio-economic conditions of the project and surrounding area.
<b>II Operation Phase</b>		
1	The Company shall implement all the recommendations made in the Environmental Impact Assessment /EMP report and risk assessment report.	Noted and complied with all the recommendations made in the Environmental Management Plan and applicable mitigation measures are adapted wherever required.
2	The installation of the Common Sewage Treatment Plant (CSTP) shall be got certified by an independent expert and a report in this regard should be submitted to the SEIAA before the project is commissioned for operation. Treated effluent emanating from STP shall be recycled/ reused to the maximum extent possible. Treatment of 100% grey water by decentralized treatment should be done. Discharge of treated sewage shall conform to the norms & standards of the Karnataka State Pollution Control Board. Treated sewage should be used for flushing, gardening, etc. as proposed. Necessary measures should be made to mitigate the odour problem from STP.	Noted. ETP and STP of required capacity will be provided in the proposed industrial area. Required land area has already been allotted for establishment of ETP and STP at the site. At present as there are limited number of industries which are generating waste water. Once industrial area is completely occupied by all the industries and there is a sufficient load, the treatment plants will be installed. The industries transporting wastewater to CETP is also less as individual industries have agreed 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/recycle of the treated water.

3	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.
4	Diesel power generating sets proposed as source of back-up power for elevators and common area illumination during operation phase should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG-sets. Use low sulphur diesel. The location of the DG sets may be decided with in consultation with Karnataka State Pollution Control Board.	Noted. The fuel used in individual DG sets during construction phase will have low sulphur content and it will be ensured that the air and noise emissions will be within the prescribed norms, so that there was no disturbance created due to use of DG sets. The industries are advised to install Pollution Control Equipment's wherever necessary and acoustic enclosures are provided to DG sets to reduce the environmental pollution (Air and Noise) as per the guidelines of KSPCB/ CPCB. Stack height for DG sets are provided as per CPCB/ KSPCB norms.
5	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 individual industry will be informed to maintain the noise levels as per the CPCB/KSPCB norms.
6	The project proponent shall ensure that the greenery of the area is maintained. Further, 33% of the project area shall be dedicated for green belt development. The local Forest department shall be associated for this purpose and requisite budget earmarked.	Agreed. It is proposed to develop 15 m green belt all along the boundary of the industrial area. Avenue plantation in the adjoining roads can also be seen in the project site and the individual industries have also been advised to do the same in the allotted plot area. Also individual industrial units are also advised to maintain green belt for 33% of the allotted plot area as applicable.
7	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.



8	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 5 mts. 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 facility as per the guidelines set by KSPCB/CPCB. The rainwater recharge well of sufficient capacity will be dug as per the guidelines.
9	The ground water level and its quality should be monitored regularly in consultation with Central Ground Water Authority.	Noted. Necessary approvals will be obtained from competent authority 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.
10	Traffic congestion near the entry and exit points from the roads adjoining the proposed project site must be avoided. Parking 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.
11	A Report on the energy conservation measures confirming to energy conservation norms finalise by Bureau of Energy Efficiency should be prepared incorporating details about building materials & technology, R & U Factors etc. and submit to the SEIAA, Karnataka in three month's time.	Noted.
12	Energy conservation measures- like installation of CFLs/TFLs for the lighting the areas outside the building should be integral part of the project design and should be in place before project commissioning. Use CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination. 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	Adequate measures should be taken to prevent odour problem from solid waste processing plant and CSTP.	Noted and will be followed. Necessary steps will be taken to prevent odour problem. Individual industries will also be informed to do the same.

14	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	Noted and complied as suggested. Individual industries are also advised to do the same.
15	The project authorities shall strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 as amended in October 1994 and January 2000. All transportation of Hazardous Chemicals shall be as per the MVA, 1989. Authorization from the KSPCB shall be obtained for collection, treatment, storage, and disposal of hazardous wastes.	Noted. Necessary approvals from the competent authority will be obtained for the safe disposal of hazardous waste as per the applicable rules and regulations.
16	The project authorities must strictly comply with rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 2003. Authorization from the KSPCB must be obtained for collection/treatment/ storage/disposal of Hazardous wastes.	Noted. Necessary information will be given to individual industries to obtain required authorization by individual industries 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. Hazardous wastes will be collected in safe and secure manner and will be disposed to authorized disposers/ recyclers /vendors etc. for safe disposal.
17	Application of solar energy should be incorporated for illumination of common areas, lighting for gardens and street lighting in addition to provision of solar water heating. A hybrid system or fully solar system for lighting and heating should be provided. Details in this regard should be submitted to the SEIAA.	Noted. Solar energy will be used wherever possible for lighting and heating systems and the industries established in the project area will also be advised to use solar energy wherever applicable/possible.
18	The individual industries shall take all necessary clearances including Environment clearance in accordance with the law. The project Authority shall incorporate such condition in the lease/ sale deed/ Agreement.	Noted. Industries will be informed regarding the said condition and the condition will be mentioned in the lease or sale deed while allotting plots to the proposed projects.
19	The project authorities shall bifurcate the industrial plots and residential plots, if any with a thick and tall vegetative barrier green belt.	Noted.
20	The project-Authority shall incorporate a condition in the prospective lease/sale deed/Agreement with individual industries that they also shall abide by the conditions of this Environmental Clearance.	Noted.

<b>B</b>	<b>GENERAL CONIDITIONS:</b>	
1	The Project authorities shall strictly adhere to the stipulations made by Karnataka State Pollution Control Board (KSPCB).	Noted. All stipulations made by the KSPCB shall be strictly followed.
2	No further expansion or modifications of the industrial area shall be carried out without prior approval of the SEIAA/Ministry of Environment and Forests as the case may be.	Noted. Prior approval will be obtained from the competent authority before any modification or expansion of the project.
3	The project proponent shall also comply with all the environmental protection measures and safeguards as per the information provided.	Agreed. All protection measures and steps will be taken for Environmental protection.
4	The implementation of the project vis-a-vis environmental action plans shall be monitored by MoEF, Regional office at Bangalore/ KSPCB/CPCB and the Department of Environment & Ecology, Bangalore. A six monthly compliance status report shall be submitted to monitoring agencies.	Noted and will be complied.
5	The project proponent shall inform the public that the project has been accorded environmental clearance by the SEIAA and copies of the clearance letter are available with the KSPCB and may also seen at website of the Authority at <a href="http://seiaa.Kar.nic.in">http://seiaa.Kar.nic.in</a> . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of same shall be forwarded to the MoEF Regional office at Bangalore/ KSPCB/ CPCB and the Department of Environment & Ecology, Bangalore.	Noted.
6	The Project authorities shall inform the MoEF, Regional Office, Bangalore/ KSPCB/ CPCB and the department of Ecology and Environment, Bangalore, the date of financial closure and final approval from the competent authorities and the date of start of the project.	Noted and will be informed as suggested.
7	The SEIAA, Karnataka may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory.	Noted.
8	The SEIAA, Karnataka reserves the right to stipulate additional conditions, if found necessary. The company in a time bound manner will implement these conditions.	Noted.

9	The above conditions will be enforced, inter-alia under the provisions of the water (Prevention & Control of pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance act, 1991 along their amendments and rules.	Noted.
10	The issue of Environment Clearance doesn't confer any right to the project proponent to operate/ run the project without obtaining statutory clearances/ sanctions from all other concerned Authorities.	Noted. All necessary approvals will be obtained from the concerned authorities before the operation of the project and the same shall be informed to the industrial units.
11	Concealing factual data or submission of false/ fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environmental (protection) Act, 1986.	Noted.
12	Any appeal against this environmental 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.
13	Officials from the Department of Environment and Ecology, Bangalore/ Regional office of MoEF, Bangalore 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 at the documents submitted to MoEF / SEIAA should be forwarded to the CCF, Regional office of MoEF, Bangalore / Department of Ecology and Environment, Bangalore/ Regional Officer, KSPCB Bangalore.	Noted. Required Full cooperation, facilities & all the necessary 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.
14	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this authority.	Noted. Any changes in the project approved, will be made as a fresh appraisal in front of the Competent Authority.
15	The authority reserves the right to add additional safeguard measures subsequently, if found necessary and to take action including revoking of the environmental clearance under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted.

16	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 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.
17	These 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, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) act, 1991 and EIA notification, 2006.	Noted.
18	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it is found that construction of the project has been started without obtaining environmental clearance.	Noted. No such activities will be carried out without the prior approval from the concerned authorities.



#### **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.

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	60.1	66.6	63.4
2	Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup>	60	19.2	26.7	22.4
3	Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>	80	15.5	21.2	19.3
4	Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>	80	8.3	13.5	10.8

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 Singihalli Village	55	42.2	55	45
2	Near Harjenahalli Village	52.7	44.0	55	45
3	Near Perjenahalli Village	54.4	41.5	55	45
4	Near Kurugal Village	51.7	42.7	75	70
5	Near Vemagal town	58.2	49.3	75	70
6	Near Project site near GSK Biopharma limited.	55.0	44.7	55	45
7	Near Thokagalagatta Village	52.1	42.8	55	45
8	Near Hullanakallu Village	54.1	43.4	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.

#### **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 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	7.13	8.36	7.8
4	Turbidity, NTU	0.6	24.1	6.4
5	Chloride as Cl, mg/L	79.23	491.23	196.1
6	Total hardness as CaCO <sub>3</sub> , mg/L	169.83	529.71	343.7
7	Calcium as Ca, mg/L	45.32	195.87	105.8
8	Magnesium as Mg, mg/L	4.91	42.25	19.3
9	Total dissolved Solids, mg/L	348	1369	701.5
10	Sulphate as SO <sub>4</sub> , mg/L	12.4	44.9	28.6
11	Nitrate as NO <sub>3</sub> , mg/L	1.49	18.91	6.1
12	Fluoride as F, mg/L	0.3	0.9	0.6
13	Iron as Fe, mg/L	BDL	BDL	BDL
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	2.2	6.9	4.6

#### **4.4. Soil Quality Monitoring:**

Soil quality in the industrial area is monitored. The soil samples are collected and analysed for different parameters.

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.

<b>Sl. No.</b>	<b>Soil Parameters</b>	<b>Minimum Value</b>	<b>Maximum Value</b>	<b>Average Value</b>
1	pH (20% Suspension)	6.75	8.54	7.5
2	Conductivity, $\mu$ mhos/cm	119	254	167.5
3	Chloride as Cl, mg/Kg	238.3	477.1	365.8
4	Moisture, %	6.3	18.4	13.9
5	Organic Matter, %	0.7	3.2	2.0
6	Calcium as Ca, mg/Kg	452.92	1145.31	745.6
7	Magnesium Mg, mg/Kg	58.8	139.2	79.1
8	Colour	Brown	Brown	Brown
9	Sulphur as S, mg/Kg	3	23.5	8.7
10	Nitrogen as N, %	0.006	0.013	0.0
11	Phosphorous as P, mg/Kg	2.66	8.3	6.2
12	Potassium as K, mg/Kg	62.2	355.8	211.7
13	Copper as Cu, mg/Kg	7.35	16.05	11.2
14	Chromium as Cr, mg/Kg	8.96	23.04	16.4
15	Zinc as Zn, mg/Kg	6.77	24.5	15.5
16	Lead as Pb, mg/Kg	3.91	15.25	8.7
17	Nickel as Ni, mg/Kg	2.94	17.01	9.4
18	Cadmium as Cd, mg/Kg	<0.1	<0.1	<0.1