



# 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:20456/701 /2021-22

Date: 13-01-2022

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, Kanakapurataluk, Ramanagara district, Karnataka to an extent of 904.86 hectares.

- Ref.:**
1. To 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.
  5. This Office first Half-yearly compliance report No.5693 dated:13-08-2021.

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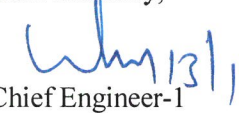
With reference to above subject, it is to be informed that MoEF&CC has issued Environmental Clearance for Establishment of Harohalli Phase II & III Industrial Area, KIADB at Harohalli village, Kanakapurataluk, Ramanagara district, Karnataka to an extent of 904.86 hectares, after finalizing the ToR granted 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. Earlier on 13-08-2021, KIADB has submitted 1<sup>st</sup> Half-yearly compliance report as per the condition of EC.

Hence, the detailed 2<sup>nd</sup> Half-yearly 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 information in the form of soft copy.

Kindly acknowledge the same.

Yours faithfully,

  
Chief Engineer-I  
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- 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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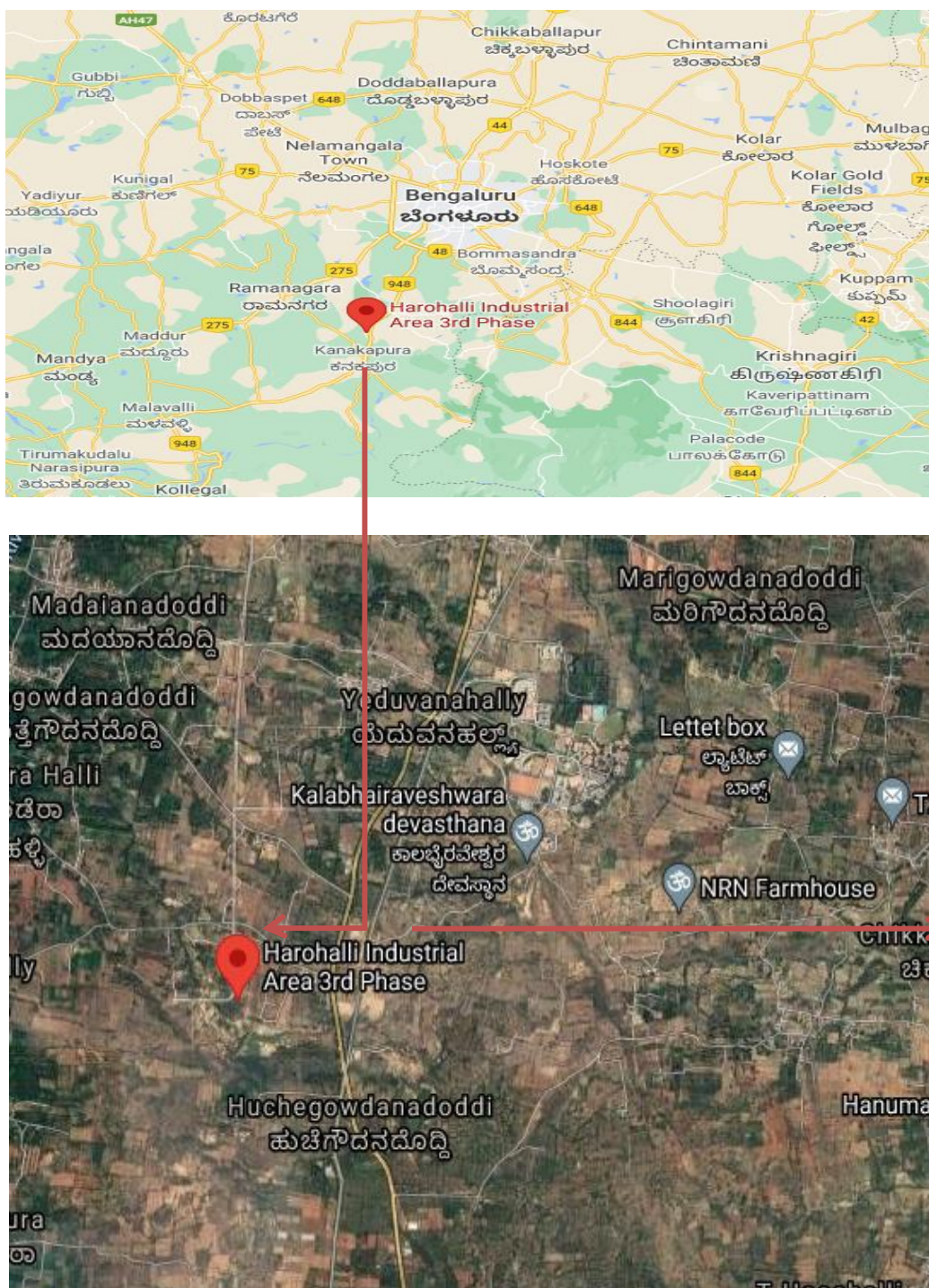
## **1.0. PROJECT DETAILS:**

- 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, Kanakapura taluk, 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.   | Complied. 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 19.03.2018. 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 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 wastewater treatment, so that the treated water conform to the standards prescribed by KSPCB/CPCB and also so that there is zero discharge of untreated 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. | Agreed. Necessary direction will be issued to individual industries for obtaining authorization by individual industries once the industries will 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. |

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| 4 | <p>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.</p>   | <p>Complied- Competent persons from KIADB &amp; Construction workers available at the Project site were advised to take necessary precautions and measures to reduce the noise and air emissions, contributed 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</p> |
| 5 | <p>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.</p> | <p>Noted. Individual industries will be strictly advised to obtain necessary Environmental Clearance from the respective Competent Authority, as applicable under EIA notification, 2006, based on the manufacturing activity proposed by individual industries. A condition will also be included 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.</p>   |
| 6 | <p>There shall be a continuous green belt along the plant premises, except at the designated entry and exit points.</p>   | <p>Noted and Complied as suggested. Avenue plantation of tree species wherever possible and green belt development in allotted area and buffer zones are done</p>   |
| 7 | <p>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.</p>  | <p>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</p>  |
| 8 | <p>Project proponent should implement Action Plan based on suggestions and assurances given during public hearing in toto.</p>  | <p>Noted.</p>   |



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| 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 Crores, 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. |



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| 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.  |

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| 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 be 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 were 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 a 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 will be 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.  |

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| 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.   |

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| 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  |

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|                             | 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.   |
| <b>II Operation Phase :</b> |   |  |
| 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.   |



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| 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.   |

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| 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 CONDITIONS:</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. Mostly construction labourers/ workers from the surrounding villages will be hired during the construction phase that were in not need of the temporary housing and required infrastructure facility will be provided to all the labourers during construction phase.   |
| 3        | Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Bangalore.   | Noted and will be complied.  |
| 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 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.  |

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| 7  | The above stipulations would be enforced among others under the provision 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 the EIA Notification, 2006.  | Noted.   |
| 8  | Officials from the Regional Office of MoEF&CC at Bangalore who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/ data by the project proponents during the inspection. A complete set of all the documents submitted to MoEF&CC should be forwarded to the CCF, Regional Office of MoEF&CC at Bangalore.   | 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 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 and 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 Regional office of this Ministry at Bangalore. | 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 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.                      |
| 14 | A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParishad/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 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 sectorial 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-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 respective Regional Offices of MoEF&CC by e-mail.   | Noted and will be complied. |

#### **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 Particulate 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 compiled reports are submitted below. The monitoring results reveal the following pollutant concentration with respect to PM, SO<sub>x</sub> and NO<sub>x</sub>:

| <b>Sl. No.</b> | <b>Parameters</b>  | <b>Limits (As Per NAAQS) for 24hrs</b> | <b>Minimum Value</b> | <b>Maximum Value</b> | <b>Average Value</b> |
|----------------|--|--|----------------------|----------------------|----------------------|
| 1              | Particulate Matter PM <sub>10</sub> , µg/m <sup>3</sup>  | 100                                    | 62.2                 | 72.6                 | 66.1                 |
| 2              | Particulate Matter PM <sub>2.5</sub> , µg/m <sup>3</sup> | 60                                     | 20.4                 | 26.7                 | 23.7                 |
| 3              | Nitrogen Dioxide NO <sub>2</sub> , µg/m <sup>3</sup>     | 80                                     | 16.5                 | 24.1                 | 19.7                 |
| 4              | Sulphur dioxide as SO <sub>2</sub> , µg/m <sup>3</sup>   | 80                                     | 7.7                  | 14.7                 | 10.3                 |

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 Ambient Noise Monitoring is carried out at 8 Locations and the detailed compiled reports are submitted below. The monitoring results reveal the following ambient noise concentration at different locations:

| Sl. No. | Locations                                   | Noise Level in db (A) |       | CPCB Standard |             |
|---------|---|-----------------------|-------|---------------|-------------|
|         |   | Leq                   |       | Lday (Ld)     | LNight (Ln) |
|         |   | Day                   | Night |               |             |
| 1       | Near Harohalli Industrial Area Project site | 59.4                  | 47.2  | 75            | 70          |
| 2       | Near Harohalli                              | 52.8                  | 43.8  | 55            | 45          |
| 3       | Near T.Hosahalli                            | 54.2                  | 43.6  | 55            | 45          |
| 4       | Near Rastajakkasundra Village               | 54.2                  | 42.8  | 55            | 45          |
| 5       | Near Cheeluru Village                       | 54                    | 44.8  | 55            | 45          |
| 6       | Near Rampura Village                        | 63.8                  | 51.8  | 75            | 70          |
| 7       | Near Devarakallahalli Village               | 54.8                  | 44.6  | 55            | 45          |
| 8       | Near Byramangala Village                    | 54.4                  | 42.7  | 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.

| <b>Sl. No</b> | <b>Parameters</b>                          | <b>Minimum Value</b> | <b>Maximum Value</b> | <b>Average Value</b> |
|---------------|--|----------------------|----------------------|----------------------|
| 1             | Color (hazen units)                        | <2.0                 | <2.0                 | <2.0                 |
| 2             | Odour                                      | Agreeable            | Agreeable            | Agreeable            |
| 3             | pH Value                                   | 7.81                 | 8.9                  | 8.25                 |
| 4             | Turbidity, NTU                             | 0.1                  | 3.4                  | 0.80                 |
| 5             | Chloride as Cl, mg/L                       | 95.28                | 231.4                | 168.44               |
| 6             | Total hardness as CaCO <sub>3</sub> , mg/L | 202.1                | 540.2                | 376.81               |
| 7             | Calcium as Ca, mg/L                        | 42.9                 | 117.2                | 77.78                |
| 8             | Magnesium as Mg, mg/L                      | 23.02                | 65.1                 | 44.31                |
| 9             | Total dissolved Solids, mg/L               | 349                  | 789                  | 640.00               |
| 10            | Sulphate as SO <sub>4</sub> , mg/L         | 19.2                 | 182.4                | 92.45                |
| 11            | Nitrate as NO <sub>3</sub> , mg/L          | 0.9                  | 32.2                 | 11.79                |
| 12            | Fluoride as F, mg/L                        | 0.2                  | 0.3                  | 0.23                 |
| 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                     | 2.4                  | 3.9                  | 3.17                 |

#### **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)         | 6.9                  | 8.1                  | 7.6                  |
| 2              | Conductivity, $\mu$ mhos/cm | 98                   | 252                  | 176.5                |
| 3              | Chloride as Cl, mg/Kg       | 47                   | 480.2                | 294.7                |
| 4              | Moisture, %                 | 1.1                  | 9.2                  | 5.3                  |
| 5              | Organic Matter, %           | 1.2                  | 8.1                  | 3.5                  |
| 6              | Calcium as Ca, mg/Kg        | 384.8                | 689.5                | 547.2                |
| 7              | Magnesium Mg, mg/Kg         | 174                  | 366                  | 273.3                |
| 8              | Colour                      | Brown                | Brown                | Brown                |
| 9              | Sulphur as S, mg/Kg         | 5.2                  | 18.2                 | 8.8                  |
| 10             | Nitrogen as N, %            | 0.001                | 0.023                | 0.0                  |
| 11             | Phosphorous as P, mg/Kg     | 4.2                  | 6.4                  | 5.1                  |
| 12             | Potassium as K, mg/Kg       | 15.1                 | 52.4                 | 35.1                 |
| 13             | Copper as Cu, mg/Kg         | 16.15                | 34.1                 | 22.6                 |
| 14             | Chromium as Cr, mg/Kg       | 14.52                | 75.45                | 41.6                 |
| 15             | Zinc as Zn, mg/Kg           | 19.05                | 44.98                | 33.9                 |
| 16             | Lead as Pb, mg/Kg           | 10.49                | 35.13                | 21.9                 |
| 17             | Nickel as Ni, mg/Kg         | 19.01                | 49.73                | 33.5                 |
| 18             | Cadmium as Cd, mg/Kg        | <0.05                | <0.05                | <0.05                |