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,

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.

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 Sompura Industrial Area, 1st stage (Dobaspet 3rd phase) & 2nd stage, KIADB of Sompura Hobli, Nelamangala Taluk, Bangalore Rural District, Karnataka to an extent of 1358.5 Acres.
- **Ref.:** 1.ToRissued by MoEF& CC on 09th September 2009.
 - 2. Environmental Public Hearing held on 09th January 2012.
 - 3. Environmental Clearance reference no.: F.No. 21-26/ 2009- I.A.III dated 10th January 2013.
 - General Condition imposed in the Environmental Clearance for submission of Half yearly Compliance

 @ Condition No. 1.
 - 5. This Office first Half-yearly compliance report No.5693 dated:13-08-2021

With reference to above subject, it is to be informed that MoEF & CC has issued Environmental Clearance for Establishment of Sompura Industrial Area, 1st stage (Dobaspet 3rd phase) & 2nd stage, KIADB of Sompura Hobli, Nelamangala Taluk, Bangalore Rural District, Karnataka to an extent of 1358.5 Acres, after finalizing the ToR granted dated 09th September 2009 and after conducting the public hearing on 09-01-2012.

In the said Environmental Clearance at the General Condition No. 1, it is stipulated that KIADB has to submit half yearly compliance report to all the conditions stipulated in the EC issued on 10th January 2013. Earlier on 30-08-2021 KIADB has submitted 1st Half-yearly compliance report as per the condition of EC.

Hence, the detailed 2nd Half-yearly point wise compliance report to all the conditions stipulated in the Environmental Clearance issued to Sompura Industrial Area, 1st stage (Dobaspet 3rd phase) & 2nd stage is being submitted to MoEF&CC for information in the form of soft copy.

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Kindly acknowledge the same.

Yours faithfully,

Chief Engineer-1 KIADB, Bengaluru.

Half Yearly Environmental Compliance Report for all the Conditions Stipulated in the Environmental Clearance issued with respect to Establishment of Sompura Industrial Area, 1st stage (Dobaspet 3rd 2nd phase) & stage at Beeragondanahalli, Hosahalli & of Thyamagondlu Hobli Makanakuppe and Laxmanapura, Pemmanahalli, Nidavanda & Bharthipura Villages of Sompura Hobli, Nelamangala Taluk, Bangalore Rural District, Karnataka- 2nd 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:

- Name of the Project: Development of Sompura Industrial Area , 1st stage (Dobaspet 3rd phase) & 2nd stage at Beeragondanahalli, Hosahalli & Makanakuppe of Thyamagondlu Hobli and Laxmanapura, Pemmanahalli, Nidavanda & Bharthipura Villages of Sompura Hobli, Nelamangala Taluk, Bangalore Rural District, Karnataka.
- 2) Environmental Clearance reference no.: F.No. 21-26/ 2009- I.A.III dated 10th January 2013.
- 3) Total Plot Area: 550 Ha (1359.08 Acres).
- **4) ToR issued:** Issued by MoEF & CC on 09th September 2009.
- **5) Public hearing:** Public Hearing held on 09th January 2012.
- 6) Category of Industries: Red, Orange and Green category.
- **7)** Total Water requirement for the Industrial area: 5 MLD (Domestic requirement: 3,520 KLD+ Industrial requirement: 800 KLD).
- 8) Total Power Requirement: 15.3 MVA.
- 9) Project Cost:Rs.106.84Crores.
- 10) Schedule & Category: 7 (C) & A category.
- **11) Address of the Correspondence:**

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

2.0. LOCATION MAP:

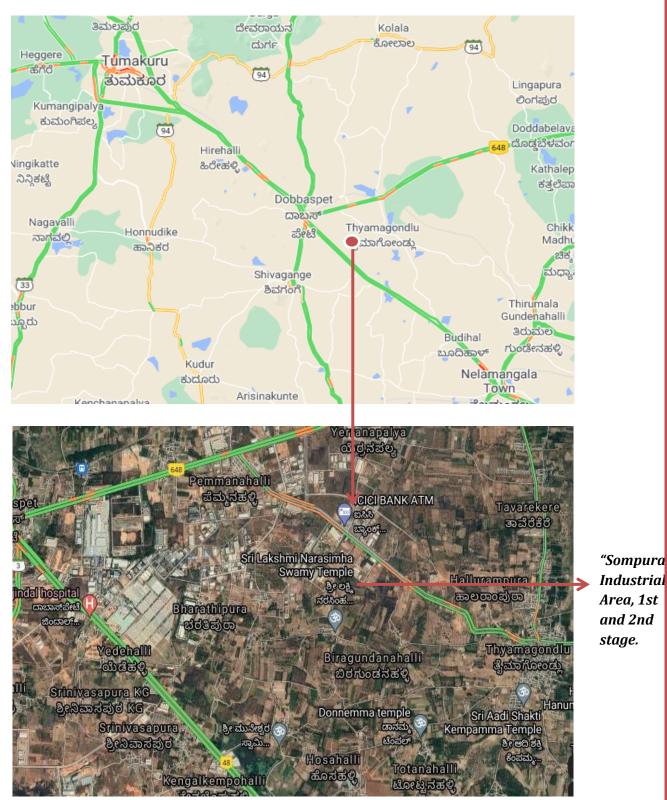


Fig.1: Map showing Sompura Industrial Area, 1st and 2nd stage.

3.0. Half Yearly Environmental Compliance Report for all the Conditions Stipulated in the Environmental Clearance issued with respect to Development of Sompura Industrial Area, 1st stage (Dobaspet 3rd phase) & 2nd stage at Beeragondanahalli, Hosahalli & Makanakuppe of Thyamagondlu Hobli and Laxmanapura, Pemmanahalli, Nidavanda & Bharthipura Villages of Sompura Hobli, Nelamangala Taluk, Bangalore Rural District, Karnataka. (Ext-1358.5 Acres).

Sl. No.	CONDITIONS STIPULATED IN THE EC	COMPLIANCE STATUS		
A	SPECIFIC CONDITIONS			
Ι	Construction Phase			
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 Ministry, before start of any construction work 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 20 th October 2012 for 1 st stage & on 12 th March 2013 for 2 nd Stage. Copy has been submitted to MoEF & CC, Regional Office, Bangalore.		
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.	Complied. KIADB has already setup an Environment management cell with necessary facilities and qualified personnel to look after the Environmental aspects and to monitor all necessary parameters and activities during construction and operational phases.		
3	Sewage shall be treated and the treated sewage shall be used in dual plumbing system/ cooling makeup/ greenbelt etc. The disposal of the treated water shall conform the regulation of State Pollution Control Board.	Noted and Industries operating in the area will be informed to provide dual plumbing system, wherever possible for efficient use of water.		
4	There shall be no disposal of solid and liquid wastes on the surrounding areas. Solid waste Management shall be as per Municipal Solid (Management and Handling) Rules, 2000.	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.		

		Noted. Competent and qualified agency	
5	Proposals for storm water drainage shall be worked out after analyzing the contour levels of the site and the surrounding area and the carrying capacity of storm water drains and their outfall.	will be appointed to carry out the design of storm water drainage systems and layout	
6	A First Aid room should be provided in the project both during construction and operation of the project.	Noted.	
7	Provision shall be made for the housing of construction labourers within the site with all necessary infrastructures and facilities such as fuel for cooling, mobile toilets, mobile STP, safe drinking water, medical healthcare, crèche etc. The housing maybe in the form of temporary structures to be removed after the completion of the project.	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.	
8	All the topsoil excavated during the construction activities should be stored for horticulture/landscape development within the project site.	Complied. The topsoil excavated will be used for landscaping, levelling and plantation purposes in the project site.	
9	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 and complied. 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.	
10	Soil and ground water samples should be tested to ascertain that there is no threat to ground water quality by leaching of heavy metals and or other toxic contaminants.	Noted. All necessary precautions will be taken to ensure that there is no contamination of soil and ground water.	
11	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.	
12	Any hazardous waste generated during construction phase, should be disposed off as per applicable rules and norms with necessary approvals of the Karnataka State Pollution Control Board.	Agreed. Necessary approvals from the competent authority will be obtained for the safe disposal of generated hazardous waste during the construction phase as per the applicable rules and regulations.	

13	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.
14	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.
15	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.	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.
16	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 should be made to reduce ambient air and noise level during construction phase, so as to conform to the stipulated standards by CPCB/ KSPCB.	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 were taken to keep the emission within the stipulated standards.
17	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 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.
18	Ready mixed concrete must be used in building construction.	Noted.

19	Storm water control and its re-use as per CGWB and BIS standards for various applications.	Noted.
20	Water demand during construction should be reduced by use of premixed concrete, curing agents and other best practices referred.	Noted.
21	Permission to draw ground water shall be obtained from the competent Authority prior to construction/operation of the project.	Noted. Necessary permission will be obtained by KIADB for digging the 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.
22	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.
23	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. To reduce the water consumption & wastewater generation, latest technologies are installed for efficient and limited use of water wherever possible. Industries will also be directed to conserve the water resource by adopting the same.
24	Use of glass may be reduced by up-to 40% to reduce the electricity consumption and load on-air conditioning. If necessary, use high quality double glass with special reflective coating in windows.	Noted and adapted wherever applicable. Industries are also advised to do the same.
25	Roof should meet prescriptive requirement as per Energy Conservation Building Code by using appropriate thermal insulation material to fulfil requirement.	
26	Opaque wall should meet prescriptive requirement as per Energy Conservation Building Code which is proposed to be mandatory for all air-conditioned spaces while it is aspirational 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.
27	The approval of the competent authority shall be obtained for structural safety of the buildings due to earthquake, adequacy of fire fighting equipment's, etc. as per National Building Code including protection measures from lightening etc.	Noted and the same will be informed to the industries before allotment of the plots.

28	Regular supervision of the above and other measures for monitoring should be in place all through the construction phase, so as to avoid disturbance to the surroundings.	Complied. Regular supervision will be done to ensure that there was no disturbance to the surroundings during the construction phase
29	Under the provisions of Environment (Protection) Act, 1986, legal action shall be initiated against the project proponent if it was found that construction of the project has been started without obtaining environmental clearance.	Noted. No such actions will be taken without the prior approval
II	Operation Phase	
1	The installation of the Sewage Treatment Plant (STP) should be certified by an independent expert and a report in this regard should be submitted to the Ministry 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 unused treated affluent shall conform to the norms and standards of the Karnataka State Pollution Control Board. 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.
2	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.

3	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.
4	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.
5	The green belt of 15 meter width arid density preferably with local species along the periphery of the plot shall be raised so as to provide protection against particulates and noise. Separate Green belt shall be provided for the chemical block.	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.
6	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.
7	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.

8	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.
9	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 width of 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.
10	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 Ministry in three month's time.	Noted.
11	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.
12	Adequate measures should be taken to prevent odour problem from solid waste processing plant and STP.	Noted and will be followed. Necessary steps will be taken to prevent odour problem. Individual industries will also be informed to do the same.
13	The building should have adequate distance between them to allow movement of fresh air and passage of natural light, air and ventilation.	Noted. 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. Individual Industrial units will also be advised to follow the same.

р	CENEDAL CONDITIONS	
В	GENERAL CONIDITIONS:	
1	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective, Regional Office of MoEF, the respective Zonal Office of and the KSPCB.	Noted and will be complied.
2	Officials from the Regional Office of MOEF, Bengaluru who would be monitoring the implementation of environmental safeguards should be given full cooperation, facilities and documents/data by the project proponents during their inspection. A complete set of all the documents submitted to MoEFshould be forwarded to the CCF, Regional office of MOEF, Bengaluru.	
3	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by this Ministry.	Noted. Any changes in the project approved, will be made as a fresh appraisal in front of the Competent Authority.
4	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.
5	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 will be strictly informed to do the same before starting any kind of activities.
6	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.

7	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 Karnataka Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.nic.in. The advertisement should be made within 10 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 Bengaluru.	Noted and complied.
8	This clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation v/s. Union of India in Writ Petition (Civil) No.460-of 2004 as may be applicable to this project.	Noted.
9	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisad/ 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.
10	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, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Noted and will be complied.
11	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 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 Particular Matter (PM 10), Fine Particulate Matter (PM 2.5), Sulphur Dioxide (SO2) and Nitrogen Dioxide (NO2) at 8 Locations.

The monitoring results reveal the following pollutant concentration with respect to PM, SOx and NOX:

Sl. No.	Parameters	Limits (As Per NAAQS) for 24hrs	Minimum Value	Maximum Value	Average Value
1	Particulate Matter PM10, μg/m3	100	66.2	74.5	70.5
2	Particulate Matter PM2.5, μg/m3	60	23.4	27.7	25.7
3	Nitrogen Dioxide NO2, µg/m3	80	17.9	24.2	21.3
4	Sulphur dioxide as SO ₂ , μg/m ₃	80	9.5	15.6	11.9

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:

SI.		Noise Level in db (A) Leq		CPCB Standard		
No	Locations	Day	Night	Lday (Ld)	LNight (Ln)	
1	Near Project Site-Sompura Industrial	57.1	46	75	70	
2	Near Beeragondanah alli Village	53.4	43.8	55	45	
3	Near Makanakuppe village	52.6	43.2	55	45	
4	Near Niduvanda Village	55	44.5	55	45	
5	Near Pemmanahalli Village	53.2	43.3	55	45	
6	Near Bharatipura Village	52.8	42.8	55	45	
7	Near Hosahalli Village	54.2	44.6	55	45	
8	Near Madanahalli Village	52.9	44.7	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.

SI. 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	7.1	8.2	7.64
4	Turbidity, NTU	0.2	0.8	0.51
5	Chloride as Cl, mg/L	81.04	139.57	104.68
6	Total hardness as CaCO ₃ , mg/L	88.96	533.76	272.43
7	Calcium as Ca, mg/L	29.13	121.4	66.16
8	Magnesium as Mg, mg/L	3.93	58.9	26.03
9	Total dissolved Solids, mg/L	243	486	365.75
10	Sulphate as SO4, mg/L	3.3	48	20.88
11	Nitrate as NO ₃ , mg/L	1.12	13.81	5.25
12	Fluoride as F, mg/L	0.1	0.9	0.46
13	Iron as Fe, mg/L	0.1	0.3	0.18
14	Lead as Pb, mg/L	BDL	BDL	BDL
15	Copper as Cu, mg/L	BDL	BDL	BDL
16	Zinc as Zn, mg/L	1.5	3.6	2.55
17	Chromium as Cr, mg/L	BDL	BDL	BDL
18	Dissolved oxygen, mg/L	3.2	4.9	4.08

Karnataka Industrial Areas Development Board (KIADB)

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.

SI. No.	Soil Parameters	Minimum Value	Maximum Value	Average Value
1	pH (20% Suspension)	7	8.3	7.7
2	Conductivity, µmhos/cm	51	145	96.9
3	Chloride as Cl, mg/Kg	336.5	920.4	578.0
4	Moisture, %	13.4	31	20.1
5	Organic Matter, %	0.3	0.6	0.5
6	Calcium as Ca, mg/Kg	34.7	543.9	101.1
7	Magnesium Mg, mg/Kg	36	548.4	245.3
8	Colour	Brown	Brown	Brown
9	Sulphur as S, mg/Kg	4	20.6	10.8
10	Nitrogen as N, %	0.007	0.01	0.0
11	Phosphorous as P, mg/Kg	1.59	9.03	3.2
12	Potassium as K, mg/Kg	62.9	600.1	222.6
13	Copper as Cu, mg/Kg	8.61	40.83	16.1
14	Chromium as Cr, mg/Kg	3.96	41.06	15.6
15	Zinc as Zn, mg/Kg	14.75	34.78	22.7
16	Lead as Pb, mg/Kg	9.14	20.04	13.3
17	Nickel as Ni, mg/Kg	3.1	20.8	8.5
18	Cadmium as Cd, mg/Kg	<0.1	<0.1	<0.1