

**REVISED ACTION PLAN  
FOR  
OTHER POLLUTED AREA (OPA)  
RAICHUR GROWTH CENTER  
INDUSTRIAL AREA/ESTATE,  
RAICHUR, KARNATAKA STATE**

**PREPARED BY,**



**KARNATAKA STATE POLLUTION CONTROL BOARD**

**2023-2024**

**REVISED ACTION PLAN FOR SEVERELY POLLUTED  
RAICHUR GROWTH CENTER INDUSTRIAL AREA,  
RAICHUR DISTRICT, KARNATAKA STATE,  
PREPARED BY KSPCB.**

**PREAMBLE:**

Ministry of Environment, Forest & Climate Change (MoEF&CC), Govt. of India in association with Central Pollution Control Board (CPCB), Delhi and Indian Institute of Technology (IIT), New Delhi have carried out an environmental assessment of industrial clusters across the country based on Comprehensive Environmental Pollution Index (CEPI) with the aim of identifying polluted industrial clusters & prioritizing planning needs for intervention to improve the quality of environment in these industrial clusters and the nation as a whole. The assessment so carried out has been documented in the form of a report entitled "Comprehensive Environmental Assessment of Industrial Clusters" in all 88 industrial clusters have been assessed.

The industrial clusters/areas having aggregated CEPI scores of 70 and above should be considered as critically polluted clusters/areas and need further detailed investigations in terms of the extent of damage and formulation of appropriate remedial action plan.

As per Ministry of Environment, Forest & Climate Change, Govt. of India vide office Memorandum No.J-11013/5/2010-1A.II(I) dtd:13.01.2010 has declared Raichur Growth Center Industrial Area in Raichur District as **Severely polluted area** with **CEPI score of 68.07**.The details are as follows.

<b>Industrial Area/Cluster</b>	<b>Air</b>	<b>Water</b>	<b>Land</b>	<b>CEPI</b>
<b>Raichur</b>	59.75	46.50	44.50	68.07

Meanwhile, the Central Pollution Control Board (CPCB) has issued directions to all the SPCBs to implement revised CEPI criteria and directed to comply the following vide letter No. B-29012/ESS(CPA)/2015-16/334 dated:26.04.2016.

1. Part A: Environmental quality monitoring in all CPAs.
2. Part B: Installation of Continuous Ambient Air Quality Monitoring Stations.
3. Part C: Installation of Continuous Water Quality Monitoring Stations.

4. Part D: Application of revised CEPI version 2016.
5. Part E: Action Plan and Monitoring.

As per the revised CEPI criteria, third party evaluation of Ground Water, Surface Water & Ambient Air Quality was carried out for pre & post monsoon period from M/s. Environmental Health & Safety Research & Development Centre (EHSRDC), Bengaluru. Details of monitoring locations is enclosed as Annexure- V. The said agency has submitted the final monitoring reports to the Board. Also, the Board has submitted information on pollution sources status & health statistics for CEPI calculation in the prescribed format in Annexure-A & B. As per the latest calculation, the CEPI score for KIADB industrial Area, Raichur has come down from 68.07 to 53.42.

As per the NGT Principal Bench, New Delhi order in case of 1038/2018, dated 13.12.2018, the Karnataka State Pollution Control Board has prepared **Action plan** in consultation with Central Pollution Control Board for remedial measures to restore environmental qualities within norms and enhancement of pollution control measures to bring down the prevailing pollution loads.

Also, the Raichur Growth center CEPI area does not have polluted river stretch or part of non-attainment city in terms of air quality standards.

## **1. INTRODUCTION.**

### **1.1. Area Details including brief history (background information)**

**Raichur Industrial Growth Centre** is a KIADB formed industrial area located at a distance of about 20 KM from the Raichur city in the district of Raichur in the Indian state of Karnataka. Raichur district is located between Krishna and Tungabhadra rivers. Raichur district falls in Hyderabad Karnataka region and it was earlier under the rule of Nizams of Hyderabad. The district is located at about 460 km from the state capital, Bangalore.

Raichur has a rich history, having been a part of various empires, such as the Bahmanis, Vijayanagara and Hyderabad Nizams. The city is famous for its imposing Raichur Fort. Here, stone inscriptions have been found in Persian and Arabic which belonged to the bastion of the fort, referring to its

construction in 1294. Among the ruins of the immense fort are many irrigation tanks and old temples.

The climate of the district is characterized by dryness for the major part of the year and a very hot summer. The low and highly variable rainfall renders the district liable to drought. The year may be divided broadly into four seasons. The hot season begins by about the middle of February and extends to the end of the May month. The South-west monsoon is from June to end of September. October and November are the post monsoon or retreating monsoon months and the period from December to the middle of February is the cold season.

The only meteorological observatory in the district is at Raichur. The data of this observatory may be taken as representative of the conditions in the district. December is the coldest month with the mean daily maximum temperature at 29.3 Degree C. (84.8 F) and the mean daily minimum at 17.7C (63.9F) The nights are generally cool in the season, but day temperatures sometimes reach 35 to 38 Degree C. The period from about the middle of February to May is one of continuous rise in temperatures, May is the hottest month, the mean daily maximum temperature being 39.8 (103.7 F). The heat is oppressive till the onset of the south-west monsoon by about the first week of June. Thereafter the weather becomes slightly cooler and continues to be so till the end of the South-west monsoon season. Day temperatures show a slight increase in October. From November, both day and night temperatures gradually decrease till December.

The highest maximum temperature ever recorded at Raichur was 45.6 degree Celsius (114.1 F) on 23 May 1928 and lowest minimum temperature of 7.1 degree Celsius (44.7 F) on Tuesday 11 January 2011, which is the lowest in the past 126 years as per the summary of observations recorded by the Indian Meteorological Department.

## **1.2 District directory**

It is the second largest District in the state in terms of Area. All the Seven taluks as of the district are very well irrigated, with water from the Tungabhadra Dam on the Tungabhadra River, and Narayanpura Dam on the Krishna River. Raichur is known for its paddy fields and its rice is of extremely superior quality. Raichur has numerous rice mills which export high quality rice to different countries. It also has a good trading market in cotton industry.

It is one of the five districts in Karnataka currently receiving funds from the Backward Regions Grant Fund Programme and also from the Hyderabad Karnataka Development Board.

### **1.2.1 Location & Geographical Area.**

It is located in the northeast part of the state and is bounded by Yadgir district in the north, Bijapur and Bagalkot district in the northwest, Koppal district in the west, Bellary district in the south, Mahabubnagar and Kurnool districts of Andhra Pradesh in the east.

### **1.2.2 Topography**

Situated at an altitude of 400 meter above the Mean Sea Level, the district is endowed with good water sources in rivers, i.e;- the river Krishna & the river Tungabhadra.

### **1.2.3 Availability of Minerals.**

Raichur District is one of few places in India with gold resources. Hutti Gold Mines are situated in Raichur District, around 90 km away from Raichur city has a average production of 3 tons per annum of Gold.

## **1.3 ECONOMY**

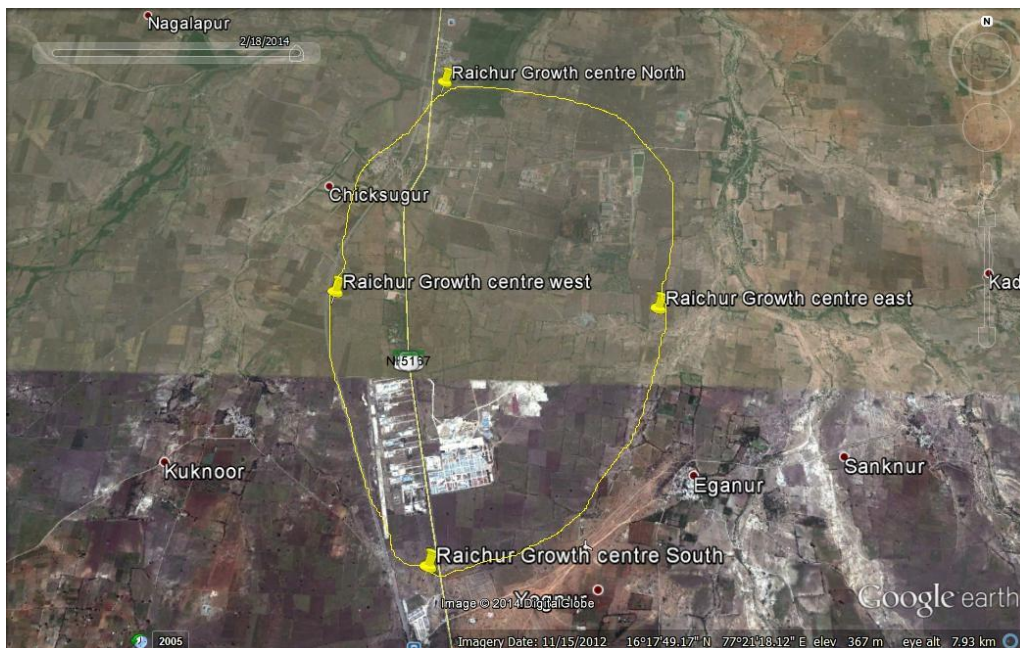
Raichur district is traditionally agricultural based economy. Major agricultural produce are Rice and Cotton. Ground nut, red chilly and pulses are also grown. There are many rice processing and Cotton processing industries located here. Service industry located here caters to needs of the surrounding

area. Medical Services, Fertilizers, Agricultural implement repairers are the major services available. There are two medical colleges, Three Engineering colleges, two dental colleges, one agricultural college (UAS RAICHUR) numerous schools and colleges providing various courses including MBA One of the most visited places in Raichur is the Raichur Thermal Power Station in Shakthinagar. It has 8 units, producing 210 MW each, employing ISO 14001, an internationally accepted specification for environmental management systems (EMS). Also a new thermal power station promoted jointly by the Karnataka Power Corporation and BHEL in the name of Yeramarus Thermal Power Station with two units of each, 800 MW, totaling 1600 MW has been established and commissioned recently.

#### 1.4 LOCATION

Raichur town is the headquarters of the district. The district has a total geographical area of 8,383 sqkms. The district has been divided into Seventaluks for administrative convenience.

#### 1.5 Google Map of the Raichur Growth center Industrial Area.



## 1.6 Map of KIADB industries Layout in Raichur Growth center – indicating plot numbers of the industries.



## 1.7 Location

### Jurisdiction of local authority:

Presently industrial area, RTPS, RTPS colony are coming under Deosugur and Yadlapura gram panchayath limits.

The above area is classified as industrial zone as per Comprehensive Development Plan of Raichur city notified by the Raichur Urban Development Authority for the year upto 2021. The industries which are significant from pollution point of view are thermal power stations, RTPS and YTPS. Also pharmaceutical industries M/s Shilpa Unit-I and Unit-II, Raichem Pharma and Trimax are major pharma units. Other units in the industrial area are rice mills, cotton ginning and fly ash brick units.

Soil : The industrial area is in general witnessed by black cotton soil. The soil cover extends up to 1 to 3 meters below the ground level. It is non-porous and sticky.

Soil Condition - Soil is in unsaturated conditions since

1. Impervious.
2. Water table is moderate in the area.
3. Most of the area is open and roads are asphalted.
4. Topography is of flat terrain and hence run off is very moderate.

Hydraulic environment -The area is located in a flat terrain and moderately elevated ground predominantly sloping towards North óWest.

### Ground water:

Ground water is found at about 30 to 50mts

### Various agencies responsible for developmental work;

Sl no	Agency	Responsible
1	Karnataka Industrial Area Development Board(KIADB)	Development of infrastructure like Road, Water Supply and drainage facility
2	Gram Panchayaths	Providing water supply and sanitation to local villages.
3	National Highway Department,PWD,GOK.	Maintenance of Hyderabad road passing through the industrial estate.
4	Raichur Thermal Power Station(Karnataka Power Corporation)	Maintenance of ash handling infrastructure,colony watersupply,roads,drainage and sewage facilities.
5	Yaramarus Thermal power Plant(KPC & BHEL)	Maintenance of ash handling infrastructure,rail infrastructure for coal handling, proposed



		colony watersupply,roads,drainage and sewage facilities.
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**Salient features of the area:**

1. The study area is located within the village limits.
2. This industrial area is surrounded by villages, commercial and heterogeneous industrial activities.
3. There is no buffer zone existing between Raichur Growth center industrial area and villages.
4. National highway Raichur óHyderabad Road is passing through the industrial area.
5. Mumbai-Chennai Railway line is also passing through the industrial area.
6. Raichur City Water Treatment plant facility is located within the industrial area.
7. River Krishna flows in NW direction at about 3 km from the industrial area.
8. The UGD facility in the industrial area is yet to be provided. RTPS colony is provided with UGD and sewerage treatment plant.

**INFRASTRUCTURE DEVELOPMENT**

Being a major industrial area in the Raichur district falling on the Hyderabad road and also well connected by the railway line.

Regular maintenance of industrial roads and drains needs to be done since it is the cause of dust pollution during vehicle movement.

**Existing Infrastructure Facility in the industrial area.**

Sl No.	Facility	Remarks
1	1. Water Supply from KIADB ( agency for supply of water)  2. Water Supply from other sources.	Partly  a) Krishna River. b) Through outside tankers.
2	Sewerage system	• Not Provided.

3	<p>a. Common sewage treatment plant within the area.</p> <p>b. Common Sewage treatment plant nearby</p>	<p>Nil with in the industrial area.</p> <p>Nearby Yeramarus, KUWS &amp; DB is planning to establish 5 MLD for Yeramarus drainage zone.</p>
4	Common Effluent treatment Plant	The KSPCB has been leased 5 Acres land in plot no 12 A for establishment of Common Effluent Treatment Plant for pharma units during 2015..Raichur Chemical Manufactures Association (RCMA), local pharma industries association has come forward to establish the CETP. KSPCB has requested KIADB to permit sublease of the plot to RCMA for establishment of CETP.KIADB is yet to take a decision in this regard.
5	Hazardous waste disposal facility	Nil
6	Hazardous waste collection common facility	Nil
7	Captive Incinerator	Nil
8	Common incinerator	Nil
9	Common Bio-Medical Waste Disposal Facility	Raichur Indian Medical Association common bio-medical facility exists at about 23 km near the Raichur city.
10	Common Municipal Solid Waste Disposal Facility	There is one Common Solid Waste Disposal Facility of CMC Raichur in

		Yaklaspur at about 23 km.
11	Common E-waste Collection & Disposal Facility	There is no e-waste collection centre. However, there are six e-waste dismantling & recycling units.
12	a) Online Ambient Air Quality monitoring Stations. b) Manual Ambient Air Quality Monitoring Stations.	3ô Maintained by RTPS 2- Maintained by YTPS 2ô Maintained by RTPS.
13	Hospital facility	There is one hospital in the study area.
14	Fire Station	About 15 km from the industrial area.
15	Parks	One park in RTPS colony maintained by the RTPS authorities.
16	Hotel with lodging facility	Nil.

### 1.9 Year development of KIADB industrial area 2018-19

Source: DIC Raichur

The year-wise growth trend in establishment of new units in MSME sector didn't witness any major change with regard to the numbers but the level of investment has doubled in the last 3 years & growing steadily. In addition it enabled employment to more & more number of people in this sector.

### 1.10 Closed Industries

The list of closed industries in the Raichur Industrial Growth centre is as listed in the following table

SI No	Name Of Industries	LMS	ROG	Type of activity
1.	Bhagiratha Lime & Chemicals, Growth Center, Raichur.	Large	Red	Chemical industries

2.	Multi Face Chemicals Ltd., Plot No 175, Raichur Growth Center, Raichur.	Large	Red	Chemical industries
3.	Mysore Petro Chemicals Ltd, P.B. No: 34, Chikkasugur, Industrial Area, Raichur- Dist.	Large	Red	Phthalic Anhydride
4.	Pollytech alloys, Plot No. 189, Growth centre, Hyderabad Road, Raichur.	Small	Red	Alloys Products
5.	Tychi Agro Industries, Raichur Growth Center, Raichur.	Small	Green	Agro Product processing
6.	Raichur Bio-energy Pvt, Ltd., Sy.No 167, 169 & 170, Raichur Growth Center, Raichur.	Large	Red	Agro based power
7.	M/s. HiriyaSomeshwara Bag Industries, Plot No: 168/D, Raichur Growth Center, Dist. Raichur	Small	Green	Gunny/ Jute Bags
8.	Surana Industries Ltd, Sy.No. 231 to 234, Raichur Growth Center, Chikkasugur Village, Wadloor Cross, Raichur.	Large	Red	Steel Plant
9.	Surana Thermal Power Ltd., Sy.No. 231 to 234, Raichur Growth Center, Raichur.	Large	Red	Thermal Power Project

### Total Industries List -2018-19 Closed

	<b>R</b>	<b>O</b>	<b>G</b>	<b>Total</b>
<b>L</b>	6	0	0	<b>6</b>
<b>M</b>	0	0	0	<b>0</b>
<b>S</b>	1	0	2	<b>3</b>
<b>Total</b>	<b>07</b>	<b>0</b>	<b>2</b>	<b>09</b>

**1.11 YTC (Yet to be commissioned)units in Raichur Industrial Growth center – Abstract**

<b>Sl No</b>	<b>Name &amp; Address of the industry</b>	<b>Catgory</b>
1.	Shruthi Drugs, Plot.No. 130-131, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	Large Red
2.	M/s. Firstline Chemicals & Resins Private Ltd, Plot No:212/P7(P) & 211/5(P), Sy.No: 159, Raichur Growth Centre, Raichur	Large Red
3.	M/s. Bhumika Agro Tech Plot No: 214/10, Raichur Growth Centre, Raichur-Tq & Dist.	Medium Red
4.	Shilpa Medicare Ltd, Plot No: 1B, 2, 2A, Deosugur Indistrial Area, Raichur.	Large Orange
5.	Sree. Laxmi Venkatagiri Industries, Plot.No. 34(A), Raichur Growth Centre, Raichur.	Small Orange
6.	M/s. Sri Brundhavana Rice Industries, Plot.No: 155P, Industrial Growth Centre, Raichur.	Small Orange
7.	M/s. Sapthagiri Agro Industries, Plot.No: 168 A & B, Raichur Growth Centre, Raichur.	Small Orange
8.	D-cotter Plant, Plot No. 86. Growth Centre, Raichur	Small Orange
9.	Sri. Balaji Ginning & Pressing Factory, Plot No.214/4P & 214/4/1, Raichur Growth Center, KIADB Industrial Area, Raichur	Small Green
10	Eashwar Industries, Plot.No. 6-C1, Industrial Area, Deosugur, Raichur.	Small Green
11	M/s. Sri Amareshwara Hybrid Seeds, plot No: 1 & 2, Sy.No: 92, Industrial Growth Centre, Chikkasugur-Village, Raichur-Dist.	Small Green
12	M/s. Shakthidhara Home Food, Plot	Small Green

	Noi: 173, Growth Centre, Chikkasugur-Village Raichur-Dist.	
13	M/s. Gayathri Industires, Sy.No: 112, Plot No: 168E, KIADB, Raichur Growth Centre, Raichur	Small Green
14	M/s. Sree Bhagyalaxmi Agro Industries, Plot No:47/B, KIADB, Industrial Area, Raichur.	Small Green
15	M/s. Sri Balajis Ginning, Plot No:214/4, Growth Centre, Hyderabad Road, Raichur.	Small Green
16	M/s. Hiriya Someshwara Industries, Plot No: 168/D1 & 168/F, Raichur Growth Centre, Raihcur.	Small Green
17	M/s. S.R. Agro Industries, Plot No: 174, 175, 194, 195, Growth Centre, Industrial Area, Raichur.	Small Green
18	M/s. Ganesh Industries, Plot.No: 212/P4P, Raichur Growth Centre, Raichur.	Small Green
19	M/s. Shri Laxmi Narasimha Industries, Plot.No: 38, KIADB Industrial Area, Raichur.	Small Green
20	M/s. Sri Gopal Polymers, KSSIDC Industrial Estate, Raichur.	Small Green
21	M/s. S.B.I Ginning Industries, Plot.No: 141 & 142, KSSIDC Industrial Estate, Raichur.	Small Green
22	M/s. Sri Laxmi Industries, Plot.No:91, 92, 93 & 94, Raichur Growth Centre, Chikasugur, Raichur.	Small Green
23	M/s. Sri Maruti Agro Industries, Plot.No: 213/9, KIADB Industrial Growth Centre, Raichur.	Small Green
24	G.R. plastic pack lines, Plot No: 167/B,Growth Centre, Chikkasugur- village,Raichur.	Small Green
25	M/s. Santosh Agro Industries, Sy.No:72, 108 & 109, Industrial Area, Growth Centre, Raichur.	Small Green
26	M/s. Gopal Industries, Sy.No: 161/1, 161/3, 161P2/2 & 161/P1/2,	Small Green

	Chikasugur Village, Raichur-Tq & Dist.	
27	M/s. Sri Nandishwar Gin. Press Industries Plot.No:214/7/P2, Growth Centre, Raichur.	Small Green
28	M/s. Sri Lakshminarayan Agro Foods, Plot.No:212P, 212 P2P, KIADB Growth Centre, Raichur.	Small Green
29	M/s. SKH Industries, Plot.No: 86, Sy.No:104 & 105, Raichur Growth Centre, Raichur.	Small Green
30	M/s. Kushi Industries, Plot.No: 113/2, Sy.No: 113, Raichur Growth Centre, Raichur.	Small Green
31	M/s. Dawood company Cotton Ginners, Plot. No: 13 & 14, KIADB Industrial Area, Raichur.	Small Green
32	M/s. Adhi Parashakthi Agro Tech, Plot.No: 214/6, Industrial Growth Centre, Raichur.	Small Green
33	M/s. Sri. Surya Rice Industries, Plot.No: 158, Raichur Growth Centre, Raichur.	Small Green

### **Total Industries List -2018-19 YTC**

	<b>R</b>	<b>O</b>	<b>G</b>	<b>Total</b>
<b>L</b>	2	1	0	<b>3</b>
<b>M</b>	1	0	0	<b>1</b>
<b>S</b>	0	5	25	<b>30</b>
<b>Total</b>	<b>3</b>	<b>6</b>	<b>25</b>	<b>34</b>

Industrial Growth Centre at Shakthinagar, Raichur was proposed in an area of 2000 Acres. Out of which an extent of 450 Acres has been developed as the industrial area by the Karnataka State Industrial Area Development Board (KIADB). The Raichur Growth Centre industrial area is having 41 operating industries and 47 units are being established in this industrial area. The category wise details of industries working in the said industrial area are as follows:

## 1.12 INDUSTRIES OPERATING IN RAICHUR GROWTH CENTER INDUSTRIAL AREA.

	<b>Red</b>	<b>Orange</b>	<b>Green</b>	<b>Total</b>
<b>Large</b>	12	0	0	12
<b>Medium</b>	5	4	2	11
<b>Small</b>	4	19	91	114
<b>Total</b>	<b>21</b>	<b>23</b>	<b>93</b>	<b>137</b>

Presently, there are 26 major industries located in the Raichur Growth Centre, Industrial Area. The major industries presently working in this Growth Centre industrial cluster are:

1	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.
2	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.
3	Shilpa Pharma Lifesciences Limited (Shilpa Medicare Ltd.), (Unit-2). Plot No: 33, 33A, 40 to 47, Industrial Growth Center, Chikkasugur-village, Raichur.
4	Trimax Bio Sciences Pvt. Ltd. Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.
5	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Chikkasugur-Village, Raichur-Tq & Dist.
6	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur-Village, Raichur.
7	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chikkasugur, Raichur-Tq & Dist.
8	M/s. Raichur Bio-Energies Pvt, Ltd., Sy.No 136/1, 136/3, Yedlapur-Village, Raichur.
9	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.



10	M/s. Manchukonda Agro Tech Pvt.Ltd, Plot No: 212P6, 217P7 & 211/3, Raichur, Growth Centre, Industrial Area, Raichur-Dist.
11	Ashtech (India) Pvt, Ltd., Plot.No. 18/23, Sy.No. 15/94, Chiksugur Hobli, Kasaba Tq, Raichur.
12	S.M.M. Agro Industries, Plot.No. 213/7, Growth Centre, Raichur.
13	M/s. KSH Agro Foods Bangalore (p) Ltd, Sy.No:26, Yegnoor Village, Dist. Raichur
14	Madhavi Edible Oils Pvt. Ltd.Plot.No. 212/P-5, Raichur Growth Centre, KIADB Industrial Area, Raichur.
15	M/s. SLN Agro Industries, Plot No:209/P, Raichur Growth Centre, Raichur.
16	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.
17	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122, Raichur Growth Centre, Industrial Area, Raichur.
18	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.
19	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-102, 105-108, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.
20	M/s. Activz Life Sciences (I) Private Limited., (Old Name Sai Amrutha) Plot No. 53, 54, 73, 74, Sy No. 102, Growth Centre, KIADB, Chiksugur, Raichur
21	Vaidhatru Pharma Private Ltd., Plot.No. 28, KIADB Industrial Area, Raichur Growth Centre, Raichur.
22	Shilpa Pharma Lifesciences Limited (Shilpa Medicare Ltd) (Unit-1) Plot No:4-A, Deosugur Industrial Area, Raichur.
23	M/s. Sree Venus Health Sciences, Plot.No:199(P), Sy.No: 108 (Part) & 72 (Part) Raichur Growth Centre, Raichur.
24	J.Y. Pharma Pvt Ltd, Plot No: 123 & 124, raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.
25	M/s. Venus Chemicals & Drugs Pvt.Ltd Plot.No:197(P), Raichur Growth Centre, Chikasugur-Village, Raichur.
26	Hema Laborateries, Sy No: 125, Raichur Growth Centre Chikkasugur Village, Raichur.

### **1.13 Raichur Thermal Power Station, KIADB industrial area, Shakthinagar, Raichur-Dist.**

**Raichur Thermal Power Station (RTPS)** is a coal-fired electric power station having capacity power generation capacity of 2720 MW located in the Raichur district of the state of Karnataka, India. It is operated by the Karnataka Power Corporation Limited (KPCL) and was the first thermal power plant to be set up in the state. The power station was commissioned during various periods from 1985 and it accounts for about 40% of the total electricity generated in Karnataka.

#### **1.13.1 Raw materials**

RTPS uses coal for generation of electricity. Its daily requirement of coal is about 24,000 metric tons, delivered from Western Coalfields Ltd. and Mahanadi Coalfields Ltd. The coal supplied is sampled using a computerized system and sent to the laboratory for testing. This ensures that the proper grade of coal is used. The plant was also using washed coal taking its lower ash content. The fresh water is drawn from the Krishna river nearby.

#### **1.13.2 Electricity production**

The coal is pulverised and fed into furnaces that convert water into steam. This steam runs the turbines to generate electricity. Each unit produces about 5 MU per day and hence the plant can produce 35 MU per day when it is functioning at full capacity.

#### **1.13.3 Issues**

RTPS generates about 1.5 million tonnes of fly ash annually which causes environmental problems. 20% of the ash produced is wet bottom ash which is let into the ash bund. Though considered safer than fly-ash, bottom ash has also been found to contain heavy metals which can be dangerous to public health. The fly-ash which gets generated during the burning of coal disperses into the

air and hence pollutes the atmosphere. This gets deposited on the surrounding land, thereby making the land infertile. The fly-ash may also cause breathing problems for humans. RTPS has taken steps to ensure that fly-ash gets precipitated out of the air by using electrostatic elements in the furnaces, but about 2% of fly-ash gets into the atmosphere. The fly-ash is disposed of by converting it into wet slurry and dumping it into vacant tracts of land (which become what are known as ash-ponds). This is not environment friendly and hence RTPS has come up with ways to make better use of fly-ash. It has entered into collaboration with the Indo-Norwegian Environment Programme (INEP) and has set up a technology demonstration centre called CASHUTEC (Centre for ASH Utilisation and Environment Conservation) near its plant. CASHUTEC demonstrates different uses for fly ash; mainly its use in the construction sector for making bricks, blocks and mosaic tiles.

The fly ash generated from RTPS is collected by cement units through their associated company namely ARV. Also Kalburgi cement is lifting fly ash from Unit-VII.

The Yaramarus Thermal Power Plant(YTPS) with a total power generation capacity of 1600 MW(2x800 MW) was established under the joint venture of KPC and BHEL. The new plant has been established with state of art technology with supercritical boiler technology. However the plant is yet to have its own ash pond. At present bottom ash is being pumped through pipeline into Ash pond-2 of RTPS, which is almost 5 km. The plant authorities have been directed by the KSPCB to have their own ash pond immediately. Fly ash generated from the YTPS is yet to start full fledged operation. At present they are handing over fly ash to nine cement plants.

#### **1.14.1.GPS Reading:**

The maps showing the geographical boundaries of the industrial cluster identified and impact zone (3 kms zone), the Drainage pattern of the cluster and

location of major industries in the cluster and the surrounding villages of the impact zone.**(Enclosed)**.Also enclosed Google map cum GPS locations of surface water quality monitoring points, Ground water quality monitoring points and Ambient Air Quality Monitoring points in the Raichur Growth Centre.

Latitude & longitude of boundaries (East, West, North, South,) of Raichur Growth Centre Industrial cluster is as follows:

<b>Direction</b>	<b>Latitude</b>	<b>Longitude</b>
East	16.1755	77.2237
West	16.1833	77.1919
North	16.2130	77.2050
South	16.1534	77.1958

**1.14.2 Total population and sensitive receptors (hospitals, educational institutions, courts etc) residing in the area comprising of geographical area of the cluster and its impact zone (minimum 2 km):**

The KIADB Growth Centre with an area around 40 square kilometer Industrial Cluster & its 2 Km surrounding impact zone are having a total population of about 25,000. The Raichur City which is at a distance of 20 km and having a population of about 2, 75,000 and about 5% of population Raichur City Corporation area comes under impact zone of KIADB Industrial area. There are no major hospitals within the impact zone of industrial cluster. However, there are small hospitals attached to the industrial establishments like RTPS to cater to emergency situation. There are no other sensitive receptors within the impact zone.

**The following villages/hamlets/Raichur city corporation wards and Gram Panchayath wards are located within the impact zone with population.**

Sl.No.	Place	Direction	Lat	Long	Area Limit
1	Yermarus	S	77.21	16.15	City Corporation
2	Chikkasugur	N	77.20	16.18	
3	Shaktinagara	N	77.21	16.21	
4	Wadloor	E	77.22	16.20	Gram Panchayat limit
5	Kuknoor	W	77.19	16.17	
6	Yegnur	E	77.21	16.16	
7	Naglapur	W	77.19	16.19	Gram Panchayat limit (Wards)
8	Heggasanhalli	N	77.20	16.20	

There is one hospital (having bed strength less than 100) and 20 Primary/High Schools located within the impact zone. The health statistics collected from three different hospitals falling in core zone and surrounding is herewith enclosed.

### **1.15. Eco-geological features:**

There is no ecological sensitive area located in the cluster (within the industrial cluster).

#### **1.15.1. Major Water Bodies (Rivers, Lakes, Ponds, etc.):**

The River Krishna Passes from north boundary of the Raichur Growth centre, KIADB industrial Area at about 3 km. The width of the river Krishna is about 350-400 meter & depth is about 11-12 meter.

#### **1.15.2. Ecological parks, Sanctuaries, flora and fauna, polluted river stretches, non-attainment cities or any eco sensitive Zones:**

No Ecological parks, Sanctuaries, polluted river stretches, non-attainment cities are located in the cluster & impact zone.

### **1.16. Highly Polluting industries (17 categories)**

1	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.
2	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.
3	Shilpa Pharma Lifesciences Limited Shilpa Medicare Ltd., (Unit-2). Plot No: 33, 33A, 40 to 47, Indl Growth Center, Chikksugur-village, Raichur.
4	Shilpa Pharma Lifesciences Limited (Shilpa Medicare Ltd) (Unit-1) Plot No:4-A, Deosugur Industrial Area, Raichur.
5	Trimax Bio Sciences Pvt. Ltd.Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.
6	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Chikkasugur-Village, Raichur-Tq & Dist.
7	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur-Village, Raichur.
8	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chicksugur, Raichur-Tq & Dist.
9	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.
10	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.
11	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122, Raichur Growth Centre, Industrial Area, Raichur.
12	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.
13	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-102, 105-108, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.
14	M/s. Activz Life Sciences (I) Private Limited., (Old Name Sai Amrutha) Plot No. 53, 54, 73, 74, Sy No. 102, Growth Centre, KIADB, Chiksugur, Raichur
15	Vaidhatru Pharma Private Ltd., Plot.No. 28, KIADB Industrial Area, Raichur Growth Centre, Raichur.
16	M/s. Sree Venus Health Sciences, Plot.No:199(P), Sy.No: 108 (Part) & 72 (Part) Raichur Growth Centre, Raichur.

17	J.Y. Pharma Pvt Ltd, Plot No: 123 & 124, raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.
18	M/s. Venus Chemicals & Drugs Pvt.Ltd Plot.No:197(P), Raichur Growth Centre, Chikasugur-Village, Raichur.
19	Hema Laborateries, Sy No: 125, Raichur Growth Centre Chikkasugur Village, Raichur.

### 1.16.1. Red category industries (other than 17 categories)

1	M/s. Raichur Bio-Energies Pvt, Ltd., Sy.No 136/1, 136/3, Yedlapur-Village, Raichur.
2	M/s. Manchukonda Agro Tech Pvt.Ltd, Plot No: 212P6, 217P7 & 211/3, Raichur, Growth Centre, Industrial Area, Raichur-Dist.

### 1.16.2. Orange and Green category industries

There are 116 Orange & Green category Operating industries . Most of them are engaged in Rice Mill, Cotton Ginning, EdibleOil Packing, Dall Industries, Brick Industries etc., Now as per the latest classification of industries/activities, fly ash bricks industries are classified under white category & they are exempted from consent mechanism of the Board. Hence they are not listed in this report.

The total number of industries operating in the cluster is given in the table below

SI No	Name and Address	Category	Category
1	S.M.M. Agro Industries, Plot.No. 213/7, Growth Centre, Raichur.	Medium	Orange
2	M/s. Madhavi Edible Oils Pvt. Ltd., Plot.No. 212/P-5, Raichur Growth Centre, KIADB Industrial Area, Raichur.	Medium	Orange

3	M/s. SLN Agro Industries, Plot No:209/P, Raichur Growth Centre, Raichur.	Medium	Orange
4	Regional Oil Seeds Growers Co- operative Societies Union Ltd., Sy.No: No: 267 & 268 Plot.No: 2B,3 & 4 ,PB. No.328, Industrial Area, Hyderabad Road, Raichur.	Small	Green
5	Raichur Solvents Ltd., Plot No. 57 & 58, Hyderabad Road, Industrial Area, Raichur.	Medium	Green
6	Sree. Skanda Food Processing India Pvt, Ltd., Plot No. 157, Industrial Growth Centre, Raichur.	Medium	Green
7	Manchal Industries, Sy.No. 12-7-2, Industrial Area, Hyderabad Road, Raichur.	Small	Orange
8	Sri. Lakshmi Narayana Agro Industries,Plot No: 25,26, 43 & 44, Industrial Area, Hyderabad Road,Raichur.	Small	Orange
9	Venkateshwara Agro Industries, Plot No. 61, Industrial Area, Raichur.	Small	Orange
10	Shri. Vaishnavi Paraboiled Industries, Plot no. 214/6, Growth Center, Industrial Area, Raichur.	Small	Orange
11	Shriya Rice Mills, Plot.No. 116 & 117, Industrial Growth Centre, Hyderabad Road, Raichur-Dist.	Small	Orange
12	Sri. Maruthi Industries, Sy.No. 213/9, Raichur Growth Centre, Hyderabad Road, Raichur.	Small	Orange
13	Shreeji Agro Tech Industries, Plot. No:214/5, Raichur Growth Center,KIADB Industrial Area Yegnoor Village, Hyderabad Road, Dist.Raichur	Small	Orange
14	M/s. Krishna Prasad Industries, Plot No:51,52,75 &76. 3rd Main Road, Growth Center, KIADB, Dist.Raichur.	Small	Orange
15	M/s.Shree. Tirumala Agro Industries, Sy.No. 154 & 155, Plot.No. 212/P2, Raichur Growth Centre, Industrial Area,Chikksugur-Village, Raichur-Tq & Dist.	Small	Orange



16	Sri. Sai Lakshmi Para boiled Industries, Plot No. 158, Industrial Growth Centre, Raichur-Dist.	Small	Orange
17	Geetanjali Agro Industries, Plot No.212/P4, KIADB Industrial Area, Chiksugur Village, Growth Center, Raichur.	Small	Orange
18	Sri. Raghavendra Enterprises, Plot. No. 12-7-35, Hyderabad Road, Raichur.	Small	Orange
19	M/s. Sri Annapurna Agro Industries, Plot.No:212 P Growth Center. Dist.Raichur	Small	Orange
20	M/s.Vinayaka Agro Industries Plot No: 214/9, Industrial Growth Centre, Raichur.	Small	Orange
21	Helicon Agro Chemicals Ltd. Block No. 211, Growth Centre, Near Chikkasugur-village, KIADB Industrial Area, Hyderabad Road, Raichur.	Small	Orange
22	M/s. Sri Venkatarathna Industries, Plot No: 160, Raichur Growth Centre, Raichur.	Small	Orange
23	Raichur Roller Flour Mill, Plot No : 56 (P), Industrial Area, Raichur.	Small	Green
24	Sri. Mahalakshmi Agro Foods, Plot.No. 168 A & B, (Sy.No. 109 & 110), Raichur Growth Centre, Industrial Area, Raichur.	Small	Green
25	Lodha Agro Products, Sy.No.C-13/14, Industrial Estate, Raichur.	Small	Green
26	Sri Paras Plastic Industries, Sy.No.C1&C2, Industrial Estate, Raichur.	Small	Green
27	Ajit Industries, Plot No: 48, Industries Estate, Raichur.	Small	Green
28	Sri. Lakshminarayana Rice Industries, Plot No : 25 & 26 Industrial Area, Raichur.	Small	Green

29	Murugan Snuff Co. Plot No : 7 KIADB, Indl area, Deosugur-village,Raichur.	Small	Green
30	Lakshmi Narasimha Swamy Enterprises (Rice Mill), Sy.No.53 &54, Industrial Area, Raichur.	Small	Green
31	Shreya Industries, Shed No. D-2, Industrial Estate, Raichur.	Small	Green
32	Raghu Ramachandra Rice Industries, Plot.No. 28/A, KIADB Growth Centre, Raichur.	Small	Green
33	TTGS Products, Plot No.104,, Growth Center, Industrial Area, Raichur Taluk, Raichur district.	Small	Green
34	M/s. Kiran Fried Gram Industries, No: 12-7-35, Hyderabad Road, Raichur.	Small	Green
35	M/s. Jawahar Industries, 12-6-215, Industrial Area, Opp: to M.G. Automobiles, Hyderabad Road, Raichur.	Small	Green
36	M/s. B. Veerendar Cotton Ginners, Plot No: 64, KIADB Industrial Area, Hyderabad Road, Raichur-Dist.	Small	Green
37	M/s. Govindnarayana Industries, # 12-6-211/1, Hyderabad Road, Raichur-Dist.	Small	Green
38	M/s. G.R.S Oil Industries (Unit of G.R. Shaileshkumar & Co) No:213/8, Growth Centre, Hyderabad Road,Raichur-Dist.	Small	Green
39	M/s. Vishwa Dall Industries Plot.No:20, Sy.No:73, Raichur Growth Centre, Raichur	Small	Green
40	M/s. Bhawal Spinners, Pvt,Ltd, Plot No. 147 (New No. 161/1), Wadlur Road, Industrial Growth Centre, Raichur.	Small	Green
41	M/s. G. Rameshlal & Brothers, Spl Plot No: L-45, Industrial Estate, KSSIDC, Raichur.	Small	Green
42	Sri. Balaji Agro Industries, Plot No: 214/2, Growth Centre, Raichur.Dist.	Small	Green

43	M/s. Sai Sannidhi Agro Tech, Plot.No: 4.5 KIADB Growth Center, Manvi - Tq, Raichur - Dist.	Small	Green
44	M/s. Sri Jyothi Cotton Ginners, Plot No: R-6, to R-20, Q-3,4,5 & SPL-14 K.S.S.I.D.C Industrial Estate, Yeramarus, Raichur-Tq & Dist.	Small	Green
45	M/s. Sri. Laxmivenkateshwara Poly Pack Industry, Plot No: 95, 96, 97, 98, 109, 110, 111 & 112 Raichur Growth Center, Industrial Area, Hyderabad Road, Dist. Raichur.	Small	Green
46	M/s. Patel Shanti Steels Pvt Ltd, Sy.No: 28, Plot No: 214/A, Raichur Growth Centre, Raichur-Dist.	Small	Green
47	M/s. Sunil Industries Cotton Ginning Factory, Plot.No:5 & P3, Industrial Estate, Yeramarus, Raichur-Tq & Dist.	Small	Green
48	U. Vishwanath Reddy & Company, Plot.No. 210/P2, Industrial Growth Centre, Raichur.	Small	Green
49	M/s. Sri Lakshmi Venkateshwara Ginning Factory, Plot.No: 60, Industrial Area, Hyderabad Road, Raichur.	Small	Green
50	M/s. Sri Ranga Industries, Plot.No: 60/2, Industrial Area, Raichur.	Small	Green
51	M/s. Sharana Basaveshwara Ginning Factory, Sy.No: 267, Plot.No: 23, 24, 45 & 46, Industrial Area, Hyderabad Road, Dist. Raichur	Small	Green
52	M/s. Rajshri Cotton Company No: 12-6-171/1, Industrial Area, Raichur.	Small	Green
53	M/s. Suman Industries, Plot.No: 212/P4/P1, Industrial Growth Centre, KIADB Industrial Area, Raichur.	Small	Green
54	Varsha Enterprises, Plot No.159(P), Sy.No.113, 120 & 121, Raichur Growth Center, Raichur.	Small	Green
55	M/s. Mani Krishna Industrial Plot. No: 168C, Growth Center, Dist. Raichur.	Small	Green
56	M/s. Srusti Power Solution, Plot.No:14, Shri Basaveshwara Layout, Raichur- Hyderabad Road, Shakthinagar, Raichur.	Small	Green

57	M/s. Srinivas Industries, Plot.No:11(P) 12 & 13 (P), Industrial Area, Raichur.	Small	Green
58	M/s. Krishna Cotton Pressing Factory, Plot.No: 5,6,19,20,21 & 22, Industrial Area, Raichur.	Small	Green
59	M/s. Barons Agricore Private Limited, Spl.Plot. No: & Sy.No:50 & Plot No:R1 to R5, KSSIDC Industrial Estate, Yeramarus, Raichur-Tq & Dist.	Small	Green
60	M/s. Rajeshwari Cotton Traders, Plot. No: N-26, Industrial Estate, Raichur-Dist.	Small	Green
61	M/s. Sri Maruti Agro Commodities (P) Ltd, Plot.No: 213/9/A, KIADB Growth Centre, Hyderabad Road, Yeramarus, Raichur.	Small	Green
62	DVN Exports Pvt.Ltd, Plot No.209/P3, Raichur Growth Center, Hyderabad Road, KIADB Industrial Area, Raichur.	Small	Green
63	M/s. Sri. Bhuwaal Industries, Plot.No:213/3, Raichur Growth Center, Hyderabad Road, Raichur.	Small	Green
64	M/s. NPS Industries, Plot. No: 24, Industrial Estate, Raichur.	Small	Green
65	M/s. Manohar Industries, MPL No:12-6-204 (New), Industrial Area, Hyderabad Road, Raichur.	Small	Green
66	M/s. Rajkamal Cottons Plot.No:62A & B, KIADB Industrial Area, Raichur.	Small	Green
67	M/s. Kodhiya Dall Mill, Plot No: 59C, KIADB, Industrial Area, Hyderabad Road,Raichur.	Small	Green
68	M/s. Jawarilal Shantilal & Co Plot No: 213/4, Raichur Industrial Growth Centre, Raichur.	Small	Green
69	M/s. Shree. Maatha Agro Tech, Plot No: 163, Raichur Growth Centre, KIADB Industrial Area, Raichur.	Small	Green
70	M/s. Ramkumar Agro Industries Plot.No:213/5, KIADB Growth Center, Hyderabad Road, Industrial Area, Dist.Raichur.	Small	Green

71	M/s. Dhanshree Industries, Plot.No:48A, Raichur Industrial Area, Raichur.	Small	Green
72	M/s. Safety Industries Cotton Ginning & Pressing Factory, Sy.No:273, Plot.No: 66, Industrial Area, Raichur.	Small	Green
73	M/s.Sri. Balaji Jute Udhyog, Plot.No:185, KIADB Growth Center, Dist.Raichur.	Small	Green
74	M/s. Manju Traders, (Cotton Ginning & Pressing) Plot.No: 212/P3P, Growth Centre, Raichur.	Small	Green
75	M/s. NBR Bricks Industries, Sy.No:267, Hissa-2, Opp: Narayana Dhaba, Hyderabad Road, Raichur.	Small	Green
76	M/s. Imran Enterprises (Fly Ash Bricks) Plot.No: 80, 81, Raichur Growth Centre, Industrial Area, Raichur.	Small	Green
77	M/s. Sri Goda Lakshmi Industries, Plot.No: 212/P5 & 212/P8, KIADB Growth Centre, Raichur.	Small	Green
78	M/s. Rithika Construction Company, Sy.No:68/6, Hyderabad Road, Chikasugur Village, Raichur.	Small	Green
78	M/s. R.B And Sons Cotton Traders Cotton Merchant Commission Agent, Sy.No: 270, Plot No: 8(P) & 9(P), Industrial Area, Hyderabad Road, Raichur.	Small	Green
80	Bhawaal Spinners Pvt. Ltd., (Unit-II), Plot No.213/2, Raichur Growth Center, Hyderabad Road, KIADB Industrial Area, Raichur.	Small	Green
81	M/s. Vishal Agro Industries, Plot.No:199/P2, Industrial Growth Centre, Raichur.	Small	Green
82	M/s. Sathyanarayana Agro Industries, Plot No: 212/P4P, Sy.No: 155, KIADB Industrial Area, Growth Center, Raichur.	Small	Green
83	M/s. Sri.Sugureshwara Industries, Plot No:21, Raichur Growth Center, Dist.Raichur.	Small	Green
84	M/s. Sri Sai Fried Grams Plot No: 22P, Raichur Growth Center, Raichur.	Small	Green

85	M/s. Shree Lakshmi Narasimha Agro Foods, Plot.No: 59, 60 & 67, 68 4th Cross, 3rd Main, KIADB Growth Centre, Raichur.	Small	Green
86	M/s. Shiv Sahay Granites, Plot.No:199(Part), Sy.No: 107, Raichur Growth Centre, Raichur.	Small	Green
87	M/s. Shri Channaveera Enterprises, Plot No:34, KIADB, Growth Center, Raichur.	Small	Green
88	M/s. Padmavathi Ginning Factory, MPL No: 12-6-171/1(O), 12-6-206(N), Hyderabad Road, Raichur.	Small	Green
89	M/s. Sri Mahalaxmi Cotton Company, Plot No:59A, Sy.No: 266, 269, 270 & 274, Industrial Area, Raichur.	Small	Green
90	Shree Hanuman Agro Industries, Plot.No: P-1,P-2 & SPL-3 Industrial Estate, Hyderabad Road, Yeramarus, Raichur-Dist.	Small	Green
91	Vijaylaxmi Enterprises, Plot No: 168 A & B, Sy.No: 109 (Part) & 110 (Part), Industrial Area, Growth Centre, Raichur.	Small	Green
92	M/s. S.R. Agro Industries, Plot No: 174 & 195, Growth Centre, Industrial Area, Raichur.	Small	Green
93	M/s. Sri Brundhavana Rice Industries, Plot.No: 155P, Industrial Growth Centre, Raichur.	Small	Orange
94	Helicon Agro Chemicals Ltd. (Unit-2) Block No. 211/2, Growth Centre, Near Chikkasugur-village, KIADB Industrial Area, Hyderabad Road, Raichur.	Medium	Orange
95	M/s. Sapthagiri Agro Industries, Plot.No: 168 A & B, Raichur Growth Centre, Raichur.	Small	Orange
96	M/s. Ganesh Industries, Plot.No: 212/P4P, Raichur Growth Centre, Raichur.	Small	Green
97	M/s. Sri Nandishwar Gin. Press Industries Plot.No:214/7/P2, Growth Centre, Raichur.	Small	Green

98	M/s. Kushi Industries, Plot.No: 113/2, Sy.No: 113, Raichur Growth Centre, Raichur.	Small	Green
99	M/s. Shanti Mills, Plot.No: 12-6-219, Industrial Area, Hyderabad Road, Raichur.	Small	Orange
100	M/s. Adhi Parashakthi Agro Tech, Plot.No: 214/6, Industrial Growth Centre, Raichur.	Small	Green
101	M/s. Balaji Agro, Sy.No:214/2, KIADB Industrial Area, Raichur.	Small	Green
102	M/s. Sri Ramachandra Agro Industries, Industrial Area, Hyderabad Road, Raichur.	Small	Green
103	M/s. Galaxy Cottons, Plot.No: 32, Sy.No: 270 (Part), Raichur Industrial Area, Raichur.	Small	Green
104	Rajashri Cotton Company, Sy.No: 273 & 271, Plot.No: 48, Industrial Area, Hyderabad Road, Raichur.	Small	Green
105	M R Agro Industries, Plot Noo. 213/6, Growth Centre, Raichur.	Small	Green
106	RCR agro cotton, Plot.No: 213/1,, Raichur Growth Centre, Raichur	Small	Green
107	Sri Nidhi Cotton Compmany, 68, Hyderabad Road, Raichur	Small	Green
108	Dhruva Logistics, Plot No: 159 A, KIADB, Growth Centre, Chikksugur Village, Raichur.	Small	Green
109	M/s. Vishwa Jyothi Agri Cottons, Plot.No. R-6 to 15, 16 to 20, Q3, 4, 5, SPL, 14, 3rd Cross, Industrial Area, Hyderabad Road, Raichur.	Small	<i>Green</i>
110	M/s. Sri. Pagunta Cotton Agritech, plot No. 71, 72, Industrial Area, Hyderabad Road, Raichur.	<i>Small</i>	<i>Green</i>
111	F A Cotton Company, Plot No. 214/7P1, Industrial Growth Centre, Hyderabad Road Raichur	Small	Green

112	Rajshri Agro Industries, Plot No. 76, Sy No. 279, KIADB Industrial Area, Raichur	Small	Green
113	M/s. Venkatadri Cotton Corporation Plot No: I1 Wing A APMC, Industrial Growth Centre, Raichur-Dist	Small	Green
114	M/s. Sri Penusila Lakshmi Narasimha Cotton Processing Unit, Plot No. 212 P10, Sy.No. 37, Raichur Growth Centre, Raichur.	Small	Green
115	Sri Appanteja Industries, KIADB Industrial Area, Hyderabad Road, Raichur	Small	Green
116	Sri Laxmi Venkateshwara Cotton Industries, Plot No: 59 B, Industrial Area,, Plot No: 59 B, Industrial Area, Raichur	Small	Green

### **Total Industries Orange and Green Category List -2023-24**

Size	Orange	Green
<b>Large</b>	0	0
<b>Medium</b>	4	2
<b>Small</b>	19	91
<b>Total</b>	<b>23</b>	<b>93</b>

## **2. WATER ENVIRONMENT**

### **2.1. Present Status of Water Environment**

The quantity of water used and waste water generated from 17 category industries located in the cluster are presented in Annexure-I to this report.

#### **2.1.1. Present levels of pollutants in water bodies/effluent receiving drains/ground water (routine parameters, special parameters and water**



**topics relevant to the area in three categories-known carcinogens, probable carcinogens and other toxics):**

In the case of RTPS treated effluent contains suspended solids and Total dissolved solids (TDS). The same is treated in sedimentation tank to the stipulated standards before discharging the same into ash pond -2. The Shilpa 2 unit is having MEE for disposal of high TDS effluent. Low TDS effluent is being treated in effluent treatment plant and same is being reused. M/s Raichem is having MEE and full fledged ETP for treatment of high TDS and low TDS effluents. The Trimax Bio sciences is having MEE with pre treatment for disposal of high TDS effluent and condensate is being used for cooling purpose. M/s Sparkvee, M/s Vibrant, M/s Jayanth Life Sciences, M/s SRC and M/s YMS are having MEE with pre-treatment for disposal of high and low TDS effluents. All 17 category units have installed online monitoring equipments as per the CPCB directions and data is being uploaded into SPCB and CPCB servers.

The KSPCB has installed online continuous river water quality monitoring station for monitoring Krishna river water quality near the intake point of RTPS. The data is being uploaded to the SPCB server.

The KSPCB is monitoring parameters mentioned as per consent conditions arrived on the basis of the chemicals handled, process & technology used and other technical inputs specific to the industry. Central Pollution Control Board & Ministry of Environment & Forest have not specified any carcinogenic and toxic parameters for discharge of effluents into the receiving bodies. The monthly analysis reports of bore wells and open wells collected in the Raichur Growth Centre, RTPS are presented in **Annexure-II**.

## **2.2. Details of Water Polluting Industries in the area/cluster**

There are 7 significant water polluting industries located in the KIADB Raichur Growth Centre, Industrial area and the details are as given below:

<b>Sl No</b>	<b>Name &amp; Address of the industry</b>	<b>Products</b>
1	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.	Power ( 2720 MW Capacity)
2	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.	Power (1600 MW Capacity/Month)
3	Shilpa Medicare Ltd., (Unit-2). Plot No: 33, 33A, 40 to 47, Indl Growth Center, Chikksugur-village, Raichur.	Bulk Drug ,Intermediates & APIø.
4	Shilpa Medicare Ltd (Unit-1) Plot No:4-A, DeosugurIndustrial Area, Raichur.	Bulk Drug,Intermediates & APIø.
5	Trimax Bio Sciences Pvt. Ltd.Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.	Bulk Drug,&Intermediates APIø.,
6	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Chikkasugur-Village, Raichur-Tq & Dist.	Bulk Drug , Intermediates & APIø.
7	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur-Village, Raichur.	Bulk Drug , Intermediates & APIø.
8	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chicksugur, Raichur-Tq & Dist.	Bulk Drug,Intermediates & APIø.
9	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.	Bulk Drug,Intermediates & APIø.
10	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.	Bulk Drug, Intermediates& APIø.
11	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122,	Bulk Drug,Intermediates & APIø.

	Raichur Growth Centre, Industrial Area, Raichur.	
12	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.	Bulk Drug, Intermediates & APIs.
13	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-102, 105-108, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	Bulk Drug, Intermediates & APIs.
14	M/s. Activz Life Sciences (I) Private Limited., (Old Name Sai Amrutha) Plot No. 53, 54, 73, 74, Sy No. 102, Growth Centre, KIADB, Chiksugur, Raichur	Bulk Drug, Intermediates & APIs.
15	Vaidhatru Pharma Private Ltd., Plot.No. 28, KIADB Industrial Area, Raichur Growth Centre, Raichur.	Bulk Drug, Intermediates & APIs.
16	M/s. Sree Venus Health Sciences, Plot.No:199(P), Sy.No: 108 (Part) & 72 (Part) Raichur Growth Centre, Raichur.	Bulk Drug, Intermediates & APIs.
17	J.Y. Pharma Pvt Ltd, Plot No: 123 & 124, raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	Bulk Drug, Intermediates & APIs.
18	M/s. Venus Chemicals & Drugs Pvt.Ltd Plot.No:197(P), Raichur Growth Centre, Chikasugur- Village, Raichur.	Bulk Drug, Intermediates & APIs.
19	Hema Laborateries, Sy No: 125, Raichur Growth Centre Chikkasugur Village, Raichur.	Bulk Drug, Intermediates & APIs.

### 2.3. Effluent Disposal Methods;

In case of RTPS treated effluent containing Total dissolved solids (TDS) & Suspended Solid (SS) is being treated in sedimentation tank and treated effluent being pumped into ash pond-2. In case of the YTPS, the blow downs from boilers, cooling towers, furnace oil handling sections are being treated in

ETP and treated water is being used for ash handling and gardening. The pharma units have provided MEE and OCEMS.

#### **2.4. Action Plan for compliance and control of pollution.**

Action Plan Taken from Raichur Growth Centre, Industrial Area, Raichur

##### **2.4.1. Existing infrastructure facilities-water quality monitoring network, ETPs, CETPs, Sewerage Treatment Plant of industry(STPs), surface drainage system, effluent conveyance channel/out falls in respect of the individual industries:**

In the cluster area as part of consent requirements industries are carrying out effluent quality monitoring at the waste water treatment level and water quality at the outfall / receiving end. KSPCB also monitors the effluent quality at the industry as well as water quality of receiving streams under different schemes. The parameters chosen for monitoring is very limited to understand the impact of discharges at the micro level without monitoring specific carcinogens and toxins. The STPs and ETPs are monitored by the industry themselves, and the performance details are being submitted to the Board. KSPCB is monitoring storm water quality in the growth center in order to check the illegal discharge of effluents by the industries.

##### **2.4.2.a. Pollution control measures installed by Major Industries:**

Salient features of pollution control measures installed by major industries are presented in **Annexure – III**

##### **b. Pollution control measures installed by small scale industries:**

The small scale industries under Red category 06 (Pharma Units) have provided treatment plants and are using the treated waste water for gardening.

##### **2.4.3. Technological Intervention**

##### **2.4.3.1. Inventorisation of prominent industries with technological gaps:**

Many industries have carried out water audit & they have prepared strategies to reduce water consumption. Some of the industries have indicated to install advanced waste water treatment techniques to produce better quality of treated waste water so as to enhance the quantity of reuse. However detailed study will be undertaken to identify technological interventions needed to ensure better compliance.

#### **2.4.3.2. Identification of low cost and advanced cleaner technology for pollution control**

Advanced cleaner technologies proposed by the individual industries are presented below. However detailed study will be undertaken for identification of new areas for adoption of cleaner technology within the cluster.

- RTPS proposes to install R.O system as well as Condensate Recovery Plant to reduce fresh water consumption.
- Shilpa Medicare Ltd has commissioned advanced waste water treatment system like RO, UF so as to reduce the fresh water consumption and leading to zero discharge.
- M/s Raichem have installed MEE and condensation water is being used for cooling tower. The LTDS effluent is being treated in ETP comprising of both aerobic and anaerobic units and treated effluent is being reused. They have also installed OCEM as per the CPCB direction.
- Further M/s Shilpa has proposed to install advanced CACO-FECO system to treat high COD stream.
- All units have installed OCEMS as per the CPCB directions.
- OCEMS data is being uploaded to CPCB and KSPCB servers.

#### **2.4.4. Infrastructure renewal**

##### **2.4.4.1. Details of existing infrastructural facilities:**

KSPCB has established a Laboratory at Raichur Office with ISO certification headed by Deputy Scientific Officers with supporting staff to carry out analysis

of samples collected. The laboratory is having instruments to analyze the parameters as specified in the consent conditions. Recently the laboratory is awarded ISO certification.

The Regional Office is headed by Environmental Officer with 1 technical staff & 2 supporting staff for inspection of units, monitoring & collection of samples, issue of consents, etc.

#### **2.4.4.2. Need have up gradation of existing facilities:**

- The number of industries has increased within the cluster area over last few years and likely to grow. Hence manpower for both administration and laboratory of KSPCB, Raichur has to be strengthened and trained.
- The parameters chosen for computation of CEPI sub index for water environment include known carcinogens, probable carcinogens & other toxins. It is therefore necessary to upgrade the present KSPCB laboratory Raichur by installing high precision instruments to analyze the parameters at micro level.
- The laboratory staff needs to be trained for the use of advanced & sophisticated equipments and for monitoring & analysis.
- Adequate storm water drains are to be provided besides renovating existing storm water drains within Raichur Growth Centre, industrial area by KIADB authorities.
- The existing service roads inside the Raichur Growth Centre industrial area have to be repaired and maintained.

#### **2.4.4.3. Rejuvenation/Management Plan for important eco-geological features:**

The situation does not warrant for rejuvenation.

#### **2.4.4.4. Carrying of effluent from industrial units located in non-industrial locations to CETP facilities by lines drains/pipelines only and prevention of their disposal into city sewerage/surface drains:**

The industries located in non-industrial location have provided adequate treatment units and presently they are not discharging in to sewerage/surface drains.

#### **2.5 CETP Land Details:**

The KIADB has leased 5 Acres of land at plot no 12 A to KSPCB during 2013 for establishment of CETP. The Raichur Chemical Manufactures Association (RCMA), association of local pharma units has come forward to establish CETP. The process to get the approval from the KIADB to sublease the land to RCMA is underway.

#### **Justification:**

- Post-implementation of Action Plan, the ambient pollution concentration will reduce as the pollutants have been reduced at their source (factor: B1) and consequently reduce the level of exposure (factor: C2).
- Shilpa Medicare is in the process of modifying the existing Effluent Treatment Plant with addition of R.O system, as well as installed MEE with Zero discharge waste water System. Shilpa Ltd has operationalised a Zero Effluent Discharge system to reduce fresh water consumption and not to discharge into any of the local water bodies.
- . M/s Raichem is having MEE and full fledged ETP for treatment of high TDS and low TDS effluents. The Trimax Bio sciences is having MEE with pre treatment for disposal of high TDS effluent and condensate is being used for cooling purpose. M/s Sparkvee, M/s Vibrant, M/s Jayanth Life Sciences, M/s SRC and M/s YMS are having MEE with pre-treatment for disposal of high and low TDS effluents.

- RTPS has proposed to upgrade their existing STP and also to install treatment system for the effluent generated from De-sulphurisation plant (Captive Power Plant).
- Trimax is in the process of modifying the existing Effluent Treatment Plant with addition of R.O system, as well as installed MEE with Zero discharge waste water System
- As a result of the proposed installation of pollution control measures, such as ETPs, STPs and technological up gradation of existing facilities, the Additional Risk Factor (factor: D) will thereby reduce.

## **2.6. Managerial and Financial aspects.**

### **2.6.1. Identified Private/Public sector potential investors and their contribution / obligation:**

Appropriate agencies will be identified after finalization of action plan.

### **2.6.2. Self-monitoring system in industries (ETPs etc.)**

KSPCB has prescribed conditions in the consent being issued to major red category industries for carrying out self-monitoring through environmental cell set up within the industry. Board is also encouraging industries to establish ISO 14001 (EMS). The lists of major industries in the cluster having ISO 14001 (EMS) are as follows.

<b>Sl No.</b>	<b>Name of Industries</b>
1	RTPS
2	Shipla Medicare Unit I
3	Shipla Medicare Unit II
4	Sparkvee
5	RAICHEM
6	Venus Chemicals and Drugs Pvt. Ltd.,



### **2.6.3. Data linkages other SPCB/CPCB (of monitoring devices):**

At present industries are submitting the reports of analysis regularly at prescribed intervals in hard copy form. The data available with KSPCB is shared with CPCB. Also all major polluting industries in the growth center have installed OCEMS as per the CPCB directions and monitoring data is sent to CPCB and KSPCB servers.

### **2.7 Treatment Plant Details of Major Industries, Raichur Growth centre, Raichur.**

Treatment plant details of the all red category industries, Raichur growth centre, industrial area, Raichur as shown in the **Annexure - III**

## **3. AIR ENVIRONMENT:**

### **3.1. Present status of Air environment supported with analytical data:**

The major air pollutants monitored in the industrial cluster are PM 10, PM2.5, CO, CO2, SO2, NOx, NH3 & VOC as per the earlier norms specified for Ambient Air Quality. All the industries have provided required chimney height and other air pollution control measures to control the emissions at the source itself. Karnataka State Pollution Control Board (KSPCB) is also monitoring Ambient Air Quality in the Raichur Growth Centre, Industrial Area. The results of various periods are presented in the form of Bar chart shown below. Based on the data it can be observed that, the ambient air quality is well within the standards specified.

#### **3.1.1. Critical locations for air quality monitoring:**

As per the earlier norms of the Ambient Air Quality Monitoring is being carried out within the industrial cluster. Based on the meteorology the critical locations for ambient air quality monitoring lays within the industrial premises viz RTPS, YTPS, Shilpa Medicare Unit I & II, Raichur Growth centre, Industrial area, Raichur.

**3.1.2. Present levels of pollutants in air (routine parameters, special parameters and air toxics relevant to the area in three categories known carcinogens, probable carcinogens and other toxic):**

Besides KSPCB, the major air polluting industries are also monitoring the ambient air quality regularly and submitting the reports to KSPCB. The summary of report for the period 2018-19.

SL. No.	Name of location	2018-19					
		Average concentration of pollutants in µg/m <sup>3</sup>					
		PM 10		SO <sub>2</sub>		NO <sub>x</sub>	
		Min	Max	Min	Max	Min	Max
1	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.	20.1	61.8	11.7	24.7	9.0	32.8
2	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.	17.3	50.8	13.4	21.4	10	11.4
3	Shilpa Medicare Ltd., (Unit-2). Plot No: 33, 33A, 40 to 47, Indl Growth Center, Chikkasugur-village, Raichur.	58.1	70.4	14.7	19.4	21.7	28.2
4	Shilpa Medicare Ltd (Unit-1) Plot No:4-A, DeosugurIndustrial Area, Raichur.	18.1	60.8	13.1	14.5	13	17.3
5	Trimax Bio Sciences Pvt. Ltd. Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.	57.1	72.6	16.4	21.3	20.2	27.3
6	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre,	62.1	70.2	17.4	24.3	23.6	29.9

	Chikkasugur-Village, Raichur-Tq & Dist.						
7	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur-Village, Raichur.	81.2	93.2	12.4	17.6	25.3	30.4
8	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chicksugur, Raichur-Tq & Dist.	66.8	74.3	9.4	12.3	16.1	20.7
9	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.	51.9	59.1	8.7	12.1	12.1	16.5
10	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.	61	74.8	7.5	8.8	11	12.5
11	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122, Raichur Growth Centre, Industrial Area, Raichur.	61	82	909	12.8	14.3	24.8
12	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.	68	72.6	8.7	10.9	12.8	19.6
13	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-	46	64	13	21	14	23

102, Raichur Centre, Raichur-Tq & Dist.	105-108, Growth Chikasugur, Raichur-Tq & Dist.						
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### 3.1.3. Predominant sources contributing to various pollutants:

Industrial sources, Vehicular movement, roads, construction activities.

### 3.2. Air Polluting Industries in the area/cluster

Sl No	Name & Address of the industry	Type of industry	Major Sources of Air Pollution.
1	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.	<b>Power Generation</b>	Boiler, coal handling ash handling and DG Sets.
2	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.	<b>Power Generation</b>	DG Sets, Boiler, coal handling and ash handling.
3	Shilpa Medicare Ltd., (Unit-2). Plot No: 33, 33A, 40 to 47, Indl Growth Center, Chikkasugur-village, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
4	Shilpa Medicare Ltd (Unit-1) Plot No:4-A, Deosugur Industrial Area, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
5	Trimax Bio Sciences Pvt. Ltd. Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers..
6	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Chikkasugur-Village, Raichur-Tq & Dist.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.

7	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur- Village, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
8	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chicksugur, Raichur- Tq & Dist.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
9	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
10	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
11	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122, Raichur Growth Centre, Industrial Area, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers..
12	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
13	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-102, 105-108, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
14	M/s. Activz Life Sciences (I) Private Limited., (Old Name Sai Amrutha) Plot No. 53, 54, 73, 74, Sy No. 102, Growth Centre, KIADB, Chiksugur, Raichur	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.

15	Vaidhatru Pharma Private Ltd., Plot.No. 28, KIADB Industrial Area, Raichur Growth Centre, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
16	M/s. Sree Venus Health Sciences, Plot.No:199(P), Sy.No: 108 (Part) & 72 (Part) Raichur Growth Centre, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
17	J.Y. Pharma Pvt Ltd, Plot No: 123 & 124, raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
18	M/s. Venus Chemicals & Drugs Pvt.Ltd Plot.No:197(P), Raichur Growth Centre, Chikasugur-Village, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.
19	Hema Laborateries, Sy No: 125, Raichur Growth Centre Chikkasugur Village, Raichur.	<b>Bulk drugs</b>	Reaction Vessels, DG Sets, Boilers and scrubbers.

### **3.3. Impact of activities of nearby area on the CEPI Area:**

The adjacent areas are generally with heavy traffic due to Raichur- Hyderabad state highway No.13 and due to vehicular emission, the Sox, Nox and PM may have impact on CEPI score of industrial cluster.

### **3.4. Action Plan for compliance and control of pollution:**

#### **3.5. Existing infrastructure facilities-Ambient air quality monitoring network.**

All the major industries in the cluster are conducting ambient air quality monitoring every month & submitting reports. The KSPCB is monitoring the parameters as per earlier National Ambient Air Quality standards.

Board has set up one AAQS in the cluster for monitoring of SO<sub>2</sub>, NO<sub>x</sub>, PM 10 and PM 2.5 parameters. KSPCB has established a Laboratory at Raichur Regional Office with 03 Deputy Scientific Officer with 2 supporting staff to

assist the Board for analysis of samples collected. The laboratory is having facility to analyze the general parameters as specified in the consent conditions.

The Regional Office is headed by the Environmental Officer with 1 technical staff (AEO) and other supporting staff for inspection of units, monitoring & collection of samples, issue of consents, etc. In addition one Senior Environmental Officer of KSPCB is stationed at Ballari to supervise the functions of Regional Office, lab and also to monitor the compliance of the major industries.

At present RTPS is monitoring VOC within the plant premises monthly as per their own monitoring protocol. Till the CPCB evolves protocol for monitoring VOCs, KSPCB will insist the industry to continue monitoring and submit the monitored results. Similarly the Board will identify industries to which this condition is applicable and insist them to monitor the VOC.

Further RTPS has established 05 nos of Ambient Air Quality Monitoring Stations out of which 03 real time monitoring & 02 are manual stations. Also, they have installed online continuous boiler stack emission monitoring system and data is being uploaded into central server.

### **Justification:**

- The presence of carcinogens is not critically high, as none of the industries in the cluster produce them as end-products and if present, are only as process intermediates (factor: A1).
- The regions that lie within the impact zone are sparsely populated as, only a few small villages are present within this area (factor: C1).
- KSPCB's monitoring shows that, the ambient air quality meets the stipulated norms and hence the resultant decreases in the level of exposure (factor: C2).

- The major industries have installed air pollution control equipments like Cyclones, multi-clones, Bag filters, Scrubbers for the control of air pollution.
- RTPS has installed Continuous ambient air quality monitoring system and proposing to install desulphurization unit for reducing sulphur emissions as per MOEF notification issued during 2015.
- M/s. Shilpa Medicare Ltd has proposed to install filtered air supply and exhaust system in the manufacturing area to reduce odor emissions.
- All the major industries in the cluster have installed appropriate air pollution control equipments and conduct regular audits on process and emissions to ensure improved process efficiency and reduction in emissions (factor: D).
- All other factors that contribute to the CEPI sub-index score remain unchanged.

### **3.5.1. Managerial and Financial aspects –Cost and time estimates**

Air quality monitoring equipments details and cost from the Board notification.

### **3.5.2. Identified Private/Public sector potential investors and their contribution/ obligation:**

Appropriate agencies will be identified after finalization of action plan.

### **3.5.3. Government Budgetary support requirement:**

Finalized action plan will be submitted to the Government seeking financial support wherever necessary.

### **3.5.4. Hierarchical and structured managerial system for efficient implementation:**

The KSPCB will oversee the implementation of finalized action plan.

### **3.5.5. Self-monitoring system in industries (Stacks, APCDs):**

KSPCB has prescribed conditions in the consent being issued to major red category industries for carrying out self-monitoring through environmental cell set up within the industry. Major industries have set up on line monitoring facilities. Board is also encouraging industries to establish ISO 14001 (EMS).



The lists of major industries in the cluster having ISO 14001 (EMS) are as follows:

<b>S No</b>	<b>Name and Address of OCEMS</b>
1	Raichur Thermal Power Station, Shakthinagar, Raichur.
2	Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.
3	Shilpa Medicare Ltd., (Unit-2) Plot No: 33, 33A, 40 to 47, Industrial Growth Center, Raichur.
4	Shilpa Medicare Ltd (Unit-1) Plot No:4-A, Deosugur Industrial Area, Raichur.
5	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Raichur.
6	Trimax Bio Sciences Pvt. Ltd., Plot.No 27, Raichur Growth Center, Industrial Area, Raichur.
7	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Raichur-
8	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Raichur.
9	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd),Plot No. 120, 122, Raichur Growth Centre, Raichur.
10	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, Raichur Growth Centre, Raichur.
11	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55,56,71 & 72, Raichur Growth Centre, Raichur.
12	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.

13	M/s. RIMACT Facility, (Raichur Indian Medical Association Common Treatment Facility) Sy.No:73/3, Post Eklaspur, Dist. Raichur.
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### **3.5.6. Data linkages to SPCB/CPCB (of monitoring devices)**

At present industries are submitting the reports of analysis regularly at prescribed intervals both in soft/hard copy form. The data available with KSPCB is shared with CPCB as & when required. KSPCB has already initiated discussions with major industries to transfer the monitoring data on a real time basis on-line to local KSPCB Office which is already having a linkage with Head office at Bangalore.

### **3.5.7. Impact due to Traffic:**

National highway-54(Hyderabad Road) passes through the cluster. Besides the Mumbai Railway also passes through the cluster. The vehicular traffic through the highway is in the range of 2000-2500 PSU per day as per the data furnished by the National Highway Authority. A number of vehicles carrying raw materials & products of industries move within the cluster. The systematic survey will only indicate the contribution of air pollution from all the above activities. Moreover this activity is highly dynamic & unpredictable. However the following steps already been taken in this cluster by industries to reduce vehicular traffic and thus reduced air pollution:

- RTPS is transporting coal through Rail.
- YTPS has started transporting coal through Rail.
- National Highway is proposed to be widened.

### **3.5.8. Pollution control measures installed by the individual sources of pollution:**

All the major air polluting industries have installed air pollution control equipments like Cyclones, multicyclones, Bag filters, Scrubbers for the control

of air pollution. The details of the control equipments are indicated in the following table.

<b>Sl No</b>	<b>Classification</b>	<b>Name &amp; Address of the industry</b>	<b>Major Sources of Air Pollution.</b>	<b>Air Pollution Control Measures Provided</b>
1	R-66	Raichur Thermal Power Station, Shakthinagar, Raichur-Dist.	Boilers, coal handling, DG sets and ash handling.	ESP and dust extraction system.
2	R-66	M/s. Yeramarus Thermal Power Station, Chikkasugur-Village, Raichur.	Boilers, coal handling, DG sets and ash handling.	ESP and dust extraction system.
3	R-60	Shilpa Medicare Ltd., (Unit-2). Plot No: 33, 33A, 40 to 47, Indl Growth Center, Chikksugur-village, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
4	R-60	Shilpa Medicare Ltd (Unit-1) Plot No:4-A, Deosugur Industrial Area, Raichur.	Boiler, Reaction vessels Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
5	R-60	Trimax Bio Sciences Pvt. Ltd. Plot.No 27, Raichur Growth Center, Industrial Area, Chikkasugur, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
6	R-60	Jayanth Life Science Pvt., Ltd, Plot.No. 29P, Sy.No:72, 73 Raichur Industrial Growth Centre, Chikkasugur-Village, Raichur-Tq & Dist.	Boiler, Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.

7	R-60	SRC Laboratories Pvt. Ltd., Plot.No. 198 & 199, Raichur Industrial Growth Center, Chikkasugur-Village, Raichur.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
8	R-60	Raichem Medicare (P) Ltd., Plot.No. 25 & 26, Raichur Growth Centre, Industrial Area, Chicksugur, Raichur-Tq & Dist.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
9	R-60	M/s. Raichur Laboratories Pvt. Ltd, Plot No: 126, 127, 128 & 129, Raichur Growth Centre, Raichur.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
10	R-60	M/s. Vibrant Pharmachem Private Limited, Plot No. 57,58, 69 & 70, Raichur Growth Centre,Chikkasugur, Raichur-Dist.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
11	R-60	M/s. Larson Pharma Pvt., Ltd (Sasank Biotech Ltd)., Plot No. 120, 121, 122, 123 & 122, Raichur Growth Centre, Industrial Area, Raichur.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
12	R-60	Sparkvee Fine Chemicals Pvt, Ltd., Plot.Nos. 55, 56,71& 72, Raichur Growth Centre, Chikkasugur, Raichur.	Boiler,Reaction vessels, Scrubber coloum and DG Sets.	Scrubbers, Multiclones and Acoustic Enclosures.
13	R-60	M/s. Y.M.S Laboratories Pvt., Ltd, Plot.No: 99-102, 105-108, Raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	Boiler,Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.

14	R-60	M/s. Activz Life Sciences (I) Private Limited., (Old Name Sai Amrutha) Plot No. 53, 54, 73, 74, Sy No. 102, Growth Centre, KIADB, Chiksugur, Raichur	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.
15	R-60	Vaidhatru Pharma Private Ltd., Plot.No. 28, KIADB Industrial Area, Raichur Growth Centre, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.
16	R-60	M/s. Sree Venus Health Sciences, Plot.No:199(P), Sy.No: 108 (Part) & 72 (Part) Raichur Growth Centre, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.
17	R-60	J.Y. Pharma Pvt Ltd, Plot No: 123 & 124, raichur Growth Centre, Chikasugur, Raichur-Tq & Dist.	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.
18	R-60	M/s. Venus Chemicals & Drugs Pvt.Ltd Plot.No:197(P), Raichur Growth Centre, Chikasugur-Village, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.
19	R-60	Hema Laborateries, Sy No: 125, Raichur Growth Centre Chikkasugur Village, Raichur.	Boiler, Reaction vessels, Scrubber coloum and DG Sets	Scrubbers, Multiclones and Acoustic Enclosures.

### **3.5.9. Technological intervention**

#### **3.5.10. Inventorization of prominent industries with technological gaps:**

Major industries in the cluster have prepared strategies to prevent the generation of air pollutants and have proposed plans to install advanced controlled technique. However detailed study will be undertaken to identify technological interventions needed to ensure better compliance.

#### **3.5.11. Identification of low cost and advanced cleaner technology for air pollution control:**

The Following industries have proposed to install advanced technology to control air pollution.

- RTPS & YTPS have proposed to install de-sulphurization plant by 2022 as per the Government of India letter No.23/22/2018-R&R,dated 30.05.2018.

#### **3.5.12. Introduction and switch over to cleaner fuel:**

Major industries have plans to switch over to low sulphur & low ash cleaner fuels. However in the case of medium & small scale industries, which uses cheaper biomass & other fuels, the KSPCB would identify possibilities and pursue such industries to switchover to cleaner fuel. Oil companies shall be insisted to supply only low sulphur fuel.

#### **3.12.1 Need of infrastructure Renovation:**

The KSPCB laboratory at Raichur needs to be strengthened with additional man power & sophisticated instruments for air quality monitoring. The existing KSPCB staff also to be trained.

#### **3.12.2. Development of roads:**

Asphalting of Roads in some portion of Raichur Growth Centre industrial area is needed and will be taken up with the concerned authorities viz. KIADB which is the responsible agency.

### **3.12.3. Impact of CEPI score after installation/commissioning of fully fledged air pollution control systems:**

By implementation of the action plan proposed by the industries and the Board, the CEPI score is expected to come down substantially

## **4. LAND ENVIRONMENT (Soil and Ground Water)**

### **4.1. Soil contamination:**

No Soil contamination is observed in the Raichur Growth Centre, Industrial Cluster.

Nature of soil: Black soil & Red loamy soil.

### **4.1.1. Present status of land environment supported with minimum one year analytical data:**

The industries are not disposing any untreated effluents and Hazardous waste within the cluster. There are no dump sites or contaminated land sites within the cluster area.

### **4.1.2. Critical locations for land/soil pollution assessment and ground water monitoring:**

Since the groundwater table is fairly high the industries have been directed not to store any leachable waste without proper lining. The Board has identified based on the groundwater movement certain critical location around major industries like RTPS, YTPS, Shilpa Medicare, Raichem, Vibrant Pharma, Sparkvee Chemicals and Trimax Bioscience & carrying out the monitoring every month. Some of the major industries also have got self-monitoring protocol of monitoring of groundwater & some time soil and submitting the reports to the Board as per the consent conditions.

### **4.1.3. Present levels of pollutants in land/soil and ground water (routine parameters, special parameters and water toxins relevant to are in three categories known carcinogens, probable carcinogens and other toxics):**

There are no specific standards available for monitoring Iron and TDS in ground water and the Board are monitoring groundwater against drinking water standards.

#### **4.1.4. Predominant sources contributing to or posing danger of pollution of land and ground water such as hazardous/toxic wastes or chemicals dumps/storage etc.**

Most of the major industries are storing their hazardous & other wastes in proper container or with proper lining of the ground to prevent the leachate reaching the aquifer.

#### **4.1.5. Sources of Soil Contamination:**

There may be issues with small & medium industries, where proper storage & handling of hazardous & other solid waste may not be available. However KSPCB will initiate a study to detect the details regarding such industries.

#### **4.1.6. Types of existing pollution:**

There is no reported cases of contamination of land. At one borewell location inside the premises of M/s Shiv Sahay Granites, Plot No.199(Part), Sy No. 107, Raichur Growth center, the analysis of bore well sample is showing high COD, TDS, Chloride, Total Hardness, Calcium, BOD, Sulphate, Total Alkalinity and Magnesium. Further investigation in this regard is undertaken as the present working granite unit is not generating effluents containing above mentioned parameters. Also, third party analysis under CEPI by M/s EHS is also undertaken.

#### **4.1.7. Remedies for abatement, treatment and restoration of normal soil quality:**

There is no need for any abatement at present.

### **4.2. Ground water contamination:**

#### **4.2.1. Present status/quality of groundwater:**

KSPCB is monitoring ground water in the cluster area every month and **Annexure- II** gives the data of ground water monitored in one year in the cluster.



#### **4.2.3. Ground water quality monitoring program:**

KSPCB is collecting samples from bore wells, open wells, lakes located in the cluster every month & vide **Annexure-II**

#### **4.2.4. Action Plan for control of pollution including cost/time aspects:**

At one borewell location inside the premises of M/s Shiv Sahay Granites, Plot No.199(Part), Sy No. 107, Raichur Growth center, the analysis of bore well sample is showing high COD, TDS, Chloride, Total Hardness, Calcium, BOD, Sulphate, Total Alkalinity and Magnesium. Further investigation in this regard is undertaken as the present working granite unit is not generating effluents containing above mentioned parameters. Also, third party analysis under CEPI by M/s EHS is also undertaken.

#### **4.2.5. Treatment and management of contaminated ground water bodies etc,**

At one borewell location inside the premises of M/s Shiv Sahay Granites, Plot No.199(Part), Sy No. 107, Raichur Growth center, the analysis of bore well sample is showing high COD, TDS, Chloride, Total Hardness, Calcium, BOD, Sulphate, Total Alkalinity and Magnesium. Further investigation in this regard is undertaken as the present working granite unit is not generating effluents containing mentioned parameters. Also, third party analysis under CEPI by M/s EHS is also undertaken.

#### **4.2.6. Impact on CEPI score after abatement of land pollution:**

Although at present no groundwater/land contamination is noticed in the cluster & impact zone, the industries within the cluster have taken up proactive measures to store the non-hazardous wastes in proper manner to prevent any contamination. Hence the CEPI score will come down on implementation of action plans.

## **Justification:**

- The region around the industrial cluster is sparsely populated, with only a few villages (Yermarus, Chikkasugur, Shaktinagara, Wadloor, Kuknoor, Yegnur, Naglapur, Heggasanhalli) falling within the impact zone thereby reducing potentially affected population (factor: C1).
- RTPS and YTPS are in the process of Mechanizing and Commissioning Coal handling facilities which will help to reduce coal spills.
- Shilpa, Raichem and Trichem are handing over the hazardous wastes like spent carbon, ETP sludge and MEE salt to the TSDF.
- RTPS has adopted mechanical / chemical treatment for oil recovery from their present operations, and the old accumulated oil sludge is bio-remediated by using oil degrading micro-organisms and Transportation.
- The hazardous wastes, like spent oil, generated from the utilities and captive power plants of all the industries are collected and sent to Recyclers and landfillable Hazardous waste is sent to TSDF.
- The bio-medical waste generated in the cluster is handed over to the common bio-medical waste treatment facility located in Raichur City (RIMACT) for safe disposal.
- The up gradation of infrastructure will result in better handling of solid waste generated within the region, thus, reducing the additional risk element (factor: D).
- The remaining factors that contribute to the CEPI sub-index score are unchanged.

## **4.3. Solid waste Generation and management**

### **4.3.1. Waste classification and quantification:**

KSPCB has classified wastes according to HWM Rules 2016, BMW Rules 2016, SW Rules 2016, E-Waste Rules, 2016, Plastic Rules 2016 and Battery Rules and subsequent notifications and quantifying waste generated from the industries accordingly

#### **4.3.1.1. Hazardous waste:** (Authorization details and photos are enclosed)

The major sources of Hazardous Waste from the pharma cluster are in the form of MEE salt, ETP sludge, process residue, spent solvents and waste oil. RTPS and YTPS generates waste oil.

**Raichur Thermal Power Station** has obtained the Authorization for Handling Hazardous waste Rules 2016. M/s **Shilpa Medicare (Unit II)** has also applied and obtained authorization under the HWM Rules 2016. M/s Raichem, M/s Vibrant Pharma, M/s Sparkvee and other pharma units are having valid authorization under HWM Rules 2016.

#### **4.3.1.2. Bio-medical waste:**

There are no major hospitals located in the cluster. However the bio-medical waste generated in the cluster is handed over to the common bio medical waste treatment facility located about 10 km away from the impact zone at RIMACT for final treatment and disposal.

#### **4.3.1.3. Electronic waste:**

No industry generates E - waste in considerable quantity in the cluster. However inventory of quantity of different types of Electronic Waste generated in the industrial area is to be carried out.

#### **4.3.1.4. Municipal solid Waste/Domestic Waste/Sludge from ETPs/CETPs/STPs and other industrial sources.**

The Raichur City Corporation has setup MSW facility in Yakalaspura near Raichur city at about 4 km. The facility comprises of composting facility (both aerobic and Vermicompost) as well as landfill. The generation of MSW is about 100 TPD. The CMC has initiated steps to segregate waste at source.

Raichur Growth Centre Industrial Area is not falling under CMC limits. Area is not having proper waste disposal facilities for non-hazardous solid wastes. The general solid waste generated from this industrial cluster is dumped unscientifically disposed around the Raichur Growth Centre Industrial Area. Proper scientific way of collection, segregation, disposal facilities is to be provided so as to improve the status of Air Quality, ground water quality and general aesthetic condition of Raichur Growth Centre Industrial Area. KIADB has to initiate some steps in this regard.

#### **4.3.1.5. Quantification of wastes and relative contribution from different sources.**

Except Hazardous & biomedical waste, other types of wastes are not quantified. **Annexure IV** provides the details of category and quantity of Hazardous Waste generated in the cluster area. The quantification details of Bio-Medical waste provided in section 4.3.1.2. Raichur City generates about 130 TPD of MSW.

#### **4.3.2. Identification of waste minimization and waste exchange options:**

Steps will be taken to set up Waste minimization circles.

#### **4.3.3. Reduction/Reuse/Recovery/Recycle options in the co-processing of wastes:**

Shilpa-1, Shilpa 2, Raichem, Trimax, Sparkvee, SRC, Jayanth Pharma, and Vibrant units are handing over the hazardous wastes like spent carbon for co-incineration in their Kiln.

#### **4.3.4. Infrastructure facilities**

##### **4.3.4.1. Existing TSDF/Incineration facilities including capacities:**

There is no TSDF/Incinerator facility in the Raichur District. At present industries are sending the waste to authorized TSDF facilities near Bangalore.

##### **4.3.4.2. Present status/performance and need have up gradation of existing facilities including enhancement of capacities:**

Common engineered landfill site for final disposal of non-hazardous solid waste in scientific manner is required to be developed for Raichur Growth Centre industrial area by the KIADB.

#### **4.3.4.3. Treatment and management of contaminated waste disposal sites, etc.**

No such sites have been identified.

#### **4.3.4.4. Impact on CEPI score after proper management of Solid Wastes.**

After providing solid waste management site CEPI score will come down.

### **5. PPP Model**

#### **5.1. Identification of project proposals (for both the options i.e. technology intervention and infrastructure renewal) for implementation under the PPP mode under the Action Plan.**

The CETP for pharma units is proposed to be developed by the Raichur Chemical Manufacturers Association (RCMA) in the plot no 12 A leased to KSPCB by the KIADB under the PPP model.

#### **5.2. Identification of stakeholders/agencies to be involved and to evolve financial and managerial mechanisms for implementation of PPP projects.**

After finalization of action plan private participation will be explored.

### **6. Other infrastructural Renewal measures:**

#### **6.1. Green Belts**

<b>Industries Name</b>	<b>Total Land</b>	<b>Green Belt Land</b>
Shilpa I	24.5 acres	6.00acre
Shilpa II	8.38 ha	3.36 ha
Trimax	32956.00qm	12347.20 sqm
Sasank	12140.56 ( 3.0 acre)	3642.160 smt
Helicon Agro chemical	5 Acres	1.50 Acre

RTPS	1274 ha	474 ha
YTPS	277.33 Ha	60.73 ha
Jayanth Life Sciences(P) Ltd.	8910 Sqm	3118.50 sqm
Raichem Medicare(P) Ltd	15 Acres	5 Acres
SRC Laboratories Ltd	2.5 Acres	0.7 Acres
Vibrant Pharmaceuticals	8098.73 sqm	3071 sqm
Larson Pharma Pvt Ltd	12140.56 sqm	3642.16sqm
Sparkvee Fine Chemicals	8094 sqm	2851.96 sqm

Every year major industries are planting saplings inside the industry premises. During 2018 about 25,000 saplings were planted by the industries located in the cluster area mainly by YTPS, Shilpa & others.

#### **6.2. A) Expansion of Industrial Area:**

Not contemplated.

#### **6.2. B) Improvement of environmental quality of existing Raichur Growth Centre, industrial area:**

KIADB has proposed to take up gradation of existing roads and storm water drains in the area. Also proposed to take up avenue plantation in the industrial area during forthcoming monsoon season.

### **7. Specific Schemes:**

#### **7.1. GIS-GPS system for pollution sources monitoring:**

At present there is no such system for pollution sources monitoring. The possibility will be explored.

#### **7.2. Hydro-geological fracturing for water bodies rejuvenation:**

At one borewell location inside the premises of M/s Shiv Sahay Granites, Plot No.199(Part), Sy No. 107, Raichur Growth center, the analysis of bore well sample is showing high COD, TDS, Chloride, Total Hardness, Calcium, BOD, Sulphate, Total Alkalinity and Magnesium. Further investigation in this regard is undertaken as the present working granite unit is not generating effluents containing above mentioned parameters. Also, third party analysis under CEPI by M/s EHS is also undertaken.

### **7.3. In-situ remediation of sewage:**

No such proposal is thought.

### **7.4. Utilization of MSW inert gas :**

No such facility is present in the industrial area nor proposed.

### **7.5. Co-processing of wastes in cement industries:**

M/s Raichem is handing over the hazardous wastes like spent carbon to the cement industries for co-incineration in their Kiln. Other industries are also contemplating to handover their incinerable hazardous wastes to cement kilns in the neighboring Bagalkote District.

### **8. Public awareness and training Programmes:**

Regional Office of KSPCB, Raichur is conducting both public awareness & training programmes in the field of environment management for the stakeholders in coordination with industries, NGOs, educational Institutes & other Government departments.

### **9. Assessment of Techno-economic feasibility of pollution control systems in clusters of small/medium scale industries.**

Study of techno-economic feasibility of pollution control systems in clusters of small/medium scale industries will be carried out.

**10. The Schedule of Local Area Committee Meetings held in respect of Other Polluted Area of Raichur Growth Center, Raichur :**

<b>Sl.No</b>	<b>Meetings</b>	<b>Date of Meeting</b>
1.	First Meeting	08.08.2019
2.	Second Meeting	16.10.2019
3.	Third Meeting	10.03.2020
4.	Fourth Meeting	11.02.2021
5.	Fifth Meeting	27.07.2022
6.	Sixth Meeting	11.01.2023

The Proceedings of the above meeting have already been communicated to the B.O. & all concerned Departments & stake holders.

**11. REVISED TIME LINE FOR COMPLYING WITH ACTION POINTS IN RESPECT OF RAICHUR GROWTH CENTER –OPA.**

As discussed in above LAC Meetings, the revised time line for complying with action points is as follows.

<b>Sl No</b>	<b>Action points(Including source and mitigation sources)</b>	<b>Responsible stake Holder</b>	<b>Earlier Time Limit</b>	<b>Revised Time Limit</b>	<b>Remarks</b>
1.	Supply of piped water supply to all industrial units present in the industrial area.	KIADB	31.12.2023	31.12.2025	A letter has been communicated to the Executive Member & CEO, KIADB on 03.07.2023 to implement the action within the time limit. <b>(Action: DDO, KIADB)</b>
2.	Laying of underground drainage (UGD) in Raichur growth	KIADB	31.12.2023	31.12.2025	A letter has been communicated to the Executive Member & CEO, KIADB on 03.07.2023 to



	center,				implement the action within the time limit. <b>(Action: DDO, KIADB)</b>
3.	Common engineered landfill site for final disposal of non-hazardous solid waste generated from industries	KIADB	31.12.2023	Completed	As all the industries are sending Hazardous & Non-Hazardous Waste to TSDF established at Kadechur in Yadgir-Dist. There is no requirement for establishment of common engineered landfill site for final disposal of non-hazardous solid waste generated from industries.
4.	Establishment of STP for growth center.	KIADB	31.12.2023	31.12.2025	A letter has been communicated to the Executive Member & CEO, KIADB on 03.07.2023 to implement the action within the time limit. <b>(Action: DDO, KIADB)</b>
5.	Up gradation of regional laboratory including strengthening of infrastructure of Regional Office.	KSPCB	Completed	Completed	The action completed on 15.12.2022 as new Regional Office cum Regional Laboratory building is completed and occupied.
6.	Establishment of CETP in industrial cluster.	KIADB & M/s. Mother Earth	31.12.2023	31.12.2025	A letter has been communicated to the M/s. Mother Earth on 21.08.2023 to implement the action within the time limit. <b>(Action: M/s. Mother Earth)</b>
7.	Construction of truck bay near the ash handling area of RTPS.	RTPS	Completed	Completed	The action completed in the month of October-2022.
8.	Widening of	National	31.12.2023	Completed	As the By-pass road is

	National Highway(Hyderabad Road)	Highway (PWD)			proposed under the Bharath Mala Project by the National Highway Authority crossing the existing Hyderabad Road, this point of action can be considered as completed.
9.	Development of Greenbelt in industrial area.	KIADB	31.12.2023	Completed	As the KIADB has planted trees in the Raichur Growth Center & same is progressing every year this point of action can be considered as completed.
10.	Installation of De-sulphurization plant.	RTPS	31.12.2023	31.12.2025	The RTPS has floated tenders & it is stated that work will be taken up after issue of work order. <b>(Action: ED, RTPS)</b>
11.	Installation of De-sulphurization plant.	YTPS	31.12.2023	31.12.2025	The YTPS has started the work & same is progressing. <b>(Action: ED, YTPS)</b>
12.	Construction of STP for Yeramarus drainage zone	KUWS & DB	Completed	Completed	The construction has been completed in October-2022 & hence the action has been taken as completed.
13.	Installation of new furnace oil handling system	RTPS	Completed	Completed	The installation has been completed in July-2022 & hence the action has been taken as completed.
14.	Restoration of polluted water bodies/contaminated sites/ground water in the said jurisdiction of CPA/SPA/OPA.	KSPCB	30.06.2024	Completed	There are no polluted water bodies/contaminated sites/ground water in the said jurisdiction of Raichur Growth Center CEPI.
15.	Installation of continuous Water Quality Monitoring Stations as per the directions issued by	KSPCB	Completed	Completed	The installation completed in the year 2019.

	CPCB on 26.04.2016 in the CPA/SPA/OPA.				
<b>16.</b>	Continuous Surveillance Monitoring of sewage/effluent discharged into lakes in CPA/SPA/OPA.	-	-	Completed	There are no lakes in the Raichur Growth Center CEPI Area. Hence implementation of this revised action plan does not arise.