



## EXECUTIVE SUMMARY

### A. BRIEF DESCRIPTION PROJECT

S. No.	PARTICULAR	DETAILS		
1	Name of the Project	Proposed Common Biomedical Waste Treatment Facility (CBWTF)		
2	Regulatory Framework	Category 7 (da) "Common Biomedical Treatment Facilities" as per Amendment dated 17 <sup>th</sup> April, 2015 of EIA Notification, 2006		
3	Location	C.S. No. 29, Kasba Bavda Kolhapur		
4	Toposheet No.	47L/1, 47L/2, 47L/5 & 47L/6		
5	Geographical Coordinate	<b>LATITUDE</b>	<b>LONGITUDE</b>	<b>ELEVATION (MSL)</b>
		16°43'20.81"N	74°14'59.70"E	553
5	Capacity	<b>EQUIPMENT</b>	<b>INSTALLED CAPACITY</b>	<b>NUMBER</b>
		Incinerator	250 Kgs/hr	1
		Autoclave	150 Kgs/hr	1
		Shredder	100 Kgs/Hr	1
6	Name of Project Proponent	Owner: Kolhapur Municipal Corporation (KMC) Operator: SS Services		
7	Area Requirement	4000 m <sup>2</sup> (Approx. 1 Acer land is already acquired. This is a part of land reserved by KMC for Civic amenities in Municipal Solid Waste handling reserve area.)		
8	Water Requirement	Total 13 KLD water will be required for proposed facility and will be supplied by Kolhapur Municipal Corporation (KMC).		
9	Power Requirement	79.39 KW Source: MSEDCL DG set of 100 KVA Capacity is arranged for emergency power backup.		



S. No.	PARTICULAR	DETAILS
10	Fuel Requirement	Type: High Speed Diesel (HSD) Quantity: 40-45 Lit/hr for Incineration and 5 Lit/hr for DG Set which will be sourced from nearest market.
11	Man Power	Construction Phase: 35 People Operation Phase: 30 People Indirect Employment: Indirect employment due to the project will be around 30 persons.
11	Project Cost	3.10 Crore
<b>Environmental Setting</b>		
12	Nearest Town	Kasba Bavda at 1.5 Km towards NW direction
13	Nearest Railhead	Chatrapati Shahu Maharaj Railway Station at 2.53 Km towards SW direction
14	Nearest Airhead	Pune International Airport at 308 Km towards N direction
15	Nearest Highway	NH-4 (Mumbai-Bangalore Highway) at 3.53 Km towards E direction
16	Nearest Water Body	Panchganga River at 1.88 Km towards NE direction
17	General topography	Topographically area is plain
18	Seismic Zone	Zone-III Moderate Risk Zone
19	Eco Sensitive Zone (National Park, Wildlife Sanctuary, Biosphere Reserve, Wild Life Corridors etc.)	Not within 10 km radius study area
20	Historical & Archaeological Important Place, Defense Establishment	<ul style="list-style-type: none"><li>Shri Mahalaxmi Temple at 4.21 Km towards SW direction</li><li>Binakhambi Ganesh Mandir at 4.35 Km towards SW direction</li></ul>

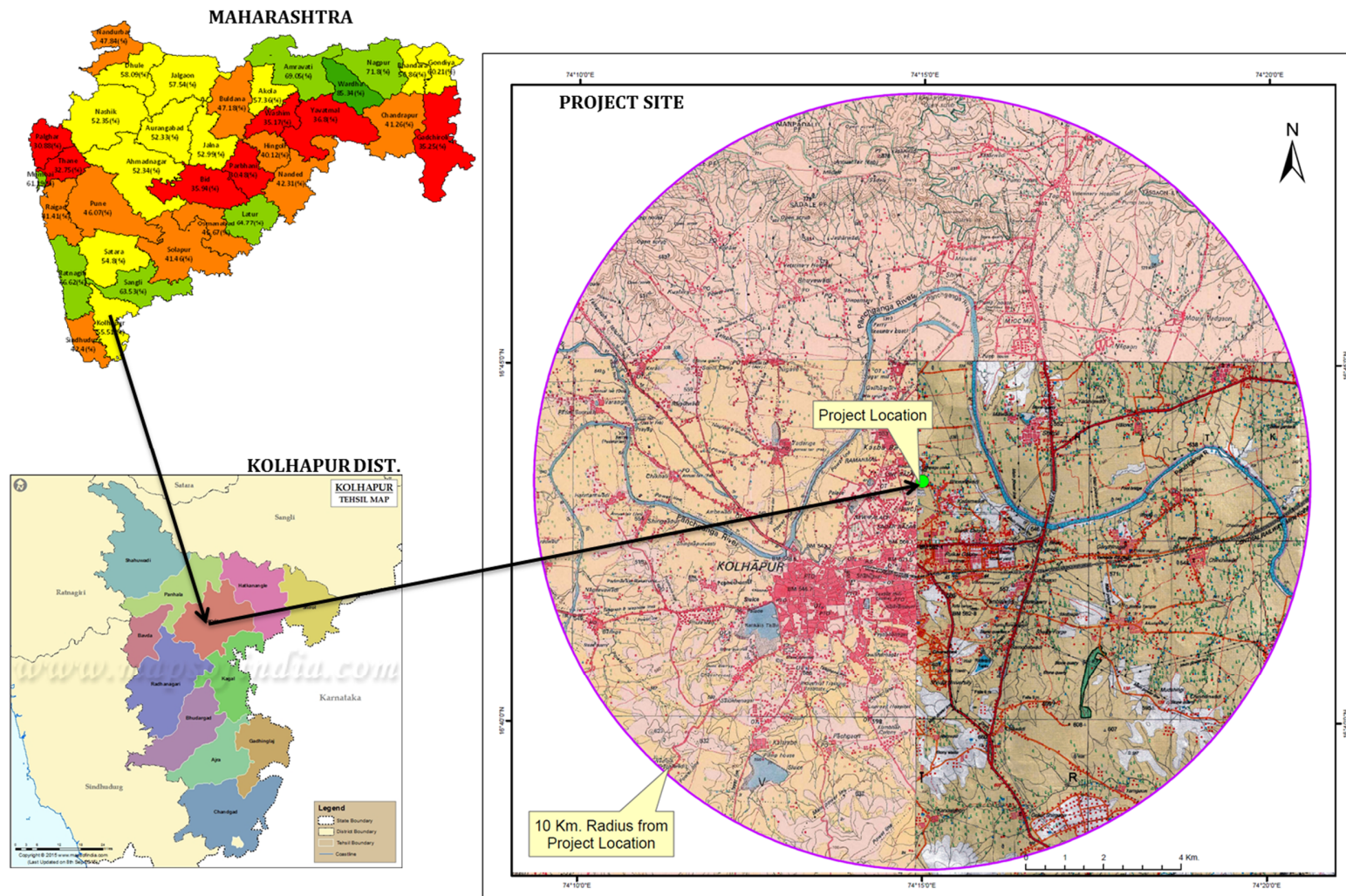


## **B. BENEFITS OF PROJECT**

- Installation of individual treatment facilities requires comparatively high capital investment so that CBWTF will become feasible and cost effective option to manage the Biomedical Waste
- Separate manpower and infrastructure required for operation and maintenance of the BMW Facility so that, CBWTF will offer the complete solution of BMW at a single place which save land, infrastructure and other facilities
- Monitoring pressure on regulatory agencies like MPCB shall be reduced as monitories of individual unit are not feasible and it is time taking task. CBWTF will allow the easy monitoring system at a place to regulatory authorities
- By running the treatment equipment at CBWTF to its full capacity, the cost of treatment of per kilogram gets significantly reduced
- Job opportunities shall be generated during construction and operation of the plan

## **C. LOCATION OF PROJECT**

Proposed CBWTF project is located at C.S. No. 29, Kasba Bavda Kolhapur. The project site and 10 km radius study area is covering with topopsheet no. 47L/1, 47L/2, 47L/5 & 47L/6.



**Figure No. 1: Project Location**

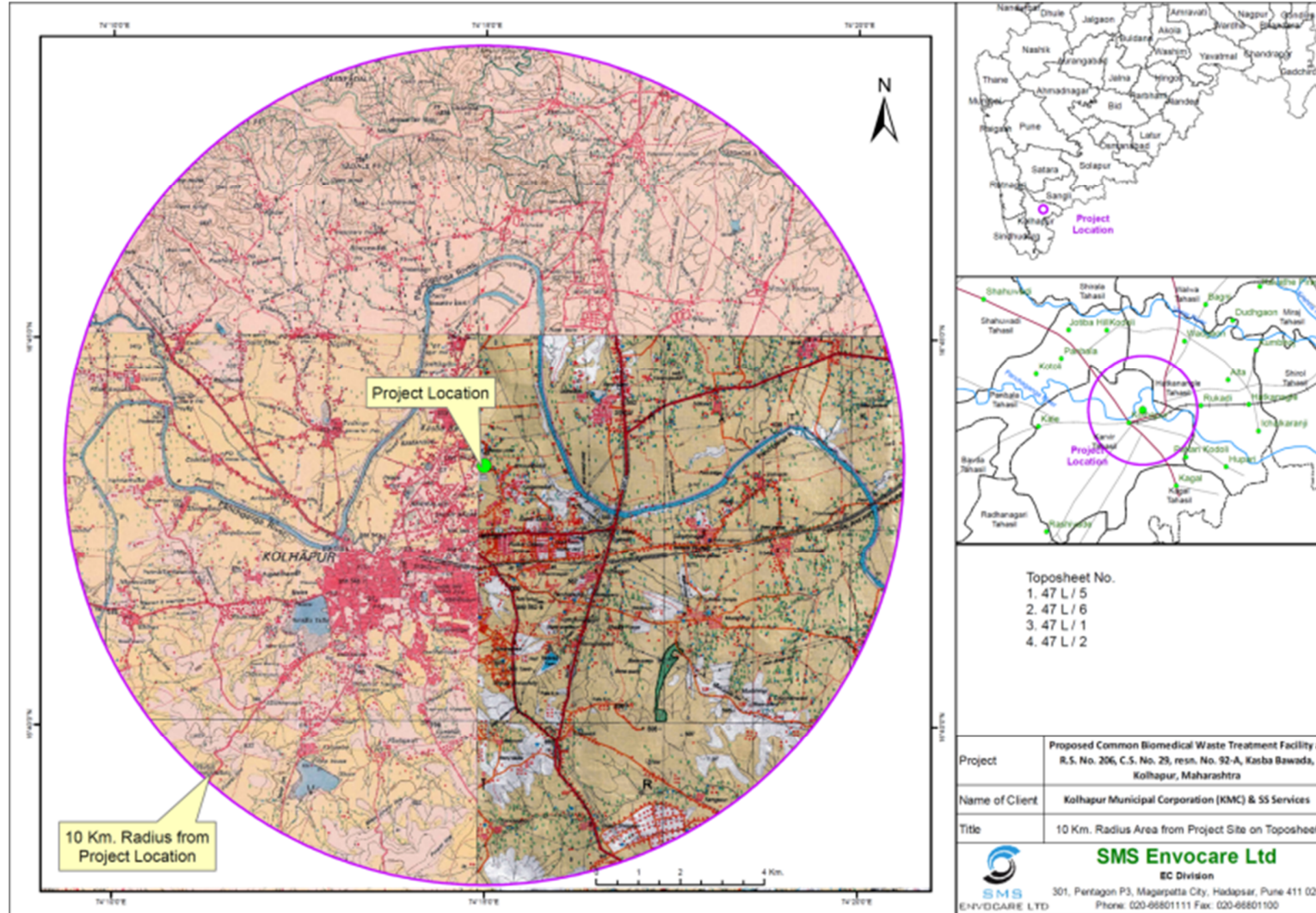


Figure No. 2: 10 km radius Toposheet map

## D. PROJECT PROCESS

The process of Common Biomedical Waste Treatment Facility (CBWTF) is displayed below:

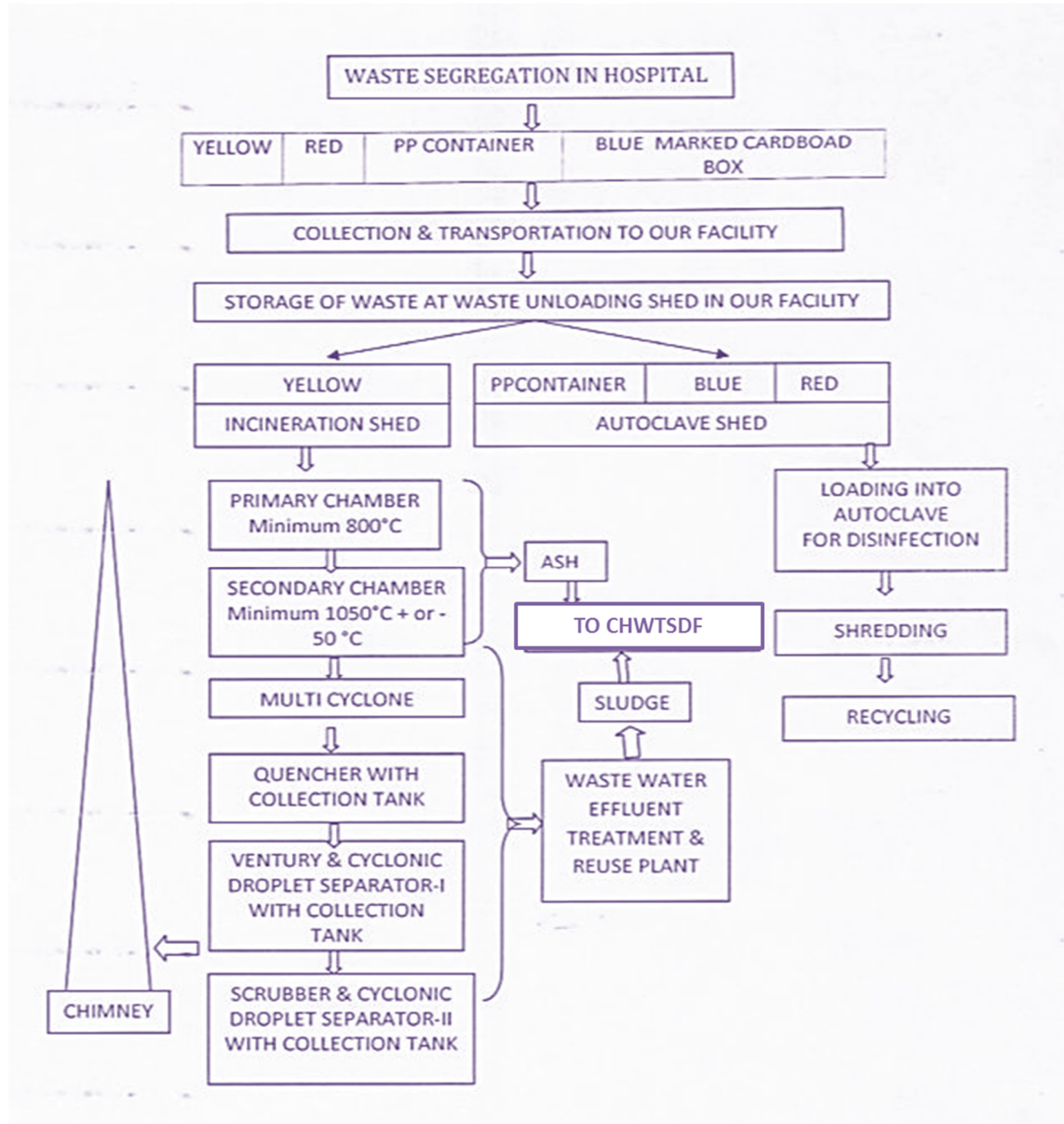


Figure No. E: Complete Treatment Process



## E. BASELINE STATUS OF ENVIRONMENT

Summary of the Environmental monitoring undertaken at different locations during post monsoon Season (October 2017 to December 2017) are given below for various parameters:

**Table 1: Environmental Baseline Monitoring Results**

Parameter	Location	Results	Standards		
Ambient Air Quality	8 Location	PM <sub>2.5</sub> : 12.3 - 31.5 µg/m <sup>3</sup> PM <sub>10</sub> : 34.5 – 67.3 µg/m <sup>3</sup> SO <sub>2</sub> : 6.3 – 17.6 µg/m <sup>3</sup> NO <sub>x</sub> : 6.4 – 19.3 µg/m <sup>3</sup>	PM <sub>2.5</sub> : 60 µg/m <sup>3</sup> PM <sub>10</sub> : 100 µg/m <sup>3</sup> SO <sub>x</sub> : 80 µg/m <sup>3</sup> NO <sub>x</sub> : 80 µg/m <sup>3</sup>		
Noise Level	8 Location	Day: 42.7 - 53.6 dB(A) Night: 34.9 – 43.1 dB(A)	Industrial	Day:75 dB(A)	Night:70 dB(A)
			Residential	Day:55 dB(A)	Night:45 dB(A)
Water Quality	Ground Water: 8 Location	pH : 7.05 to 8.13 TDS : mg/l: 378.0 – 589.0 TH : mg/l: 156.0 – 586.52	6.5 to 8.5 2000 mg/l		
	Surface Water: 1 Location (Two samples from 1000 m distance)	pH : 7.04 – 7.29 TDS : mg/l: 98.0 – 174.0 TH : mg/l: within the Limit			
Soil Quality	8 Location	pH : 7.48 – 8.12 Organic Matter: 0.75% – 3.74 % Total Nitrogen:0.04% – 1.05 % Potassium: 11.0 – 22.0 mg/kg Phosphorus: 0.18 – 4.1 mg/kg	-	-	-



## F. ENVIRONMENTAL MANAGEMENT PLAN

Environmental Management Plan consists following aspects:

### Water & Wastewater Management

- ✚ ETP of 6 CMD for treatment of Effluent and waste water
- ✚ Regular chemical analysis of Effluent at inlet and outlet point shall be conducted
- ✚ Treated effluent will not be discharged from outside the plant. All treated effluent shall be utilized in the plant process and other non-portable domestic purpose
- ✚ If required, inlet and out let shall be provided with on line monitoring facility for important parameters or as suggested by the MPCB

### Air Pollution Management

- ✚ Stack with adequate height will be provided with Incinerator and D.G. Set. I
- ✚ The Venturi scrubber and droplet separator shall be provided
- ✚ A lean concentration of NaOH Solution and water will be used to neutralize the flue gasses/solutions
- ✚ Quencher followed by Venturi Scrubber with droplet separator and then packed bed scrubber shall be provided as pollution controlling system
- ✚ All storage, handling & transfer shall be done with properly designed facilities
- ✚ Based on the waste type appropriate storage facility shall be provided
- ✚ Regular water sprinkling shall be carried out in and around the plant site
- ✚ Thick green belt shall developed to control the air pollution

### Solid & Hazardous Waste Management

- ✚ Removed top soil shall be stored separately and further will be used for plantation
- ✚ Construction waste (metallic and non-metallic) shall be stored separately and will be sent to recyclers
- ✚ Wooden waste can be given to local people as fuel wood, if the wish to utilize
- ✚ ETP sludge shall be stored in designed pit for evaporation. Dried sludge shall be sent to CHWTSDF
- ✚ Incineration ash and disinfected needles shall be stored separately and also shall be sent to CHWTSDF





- ✚ Construction waste shall be managed as per Construction and Demolition Waste management Rule, 2016
- ✚ Electronic waste generated during construction and operation phase will be managed as per E-Waste Management Rule, 2016
- ✚ Municipal solid waste generated during construction & operation phase will be managed as per Solid Waste Management Rule, 2016

### **Noise and Vibration Management**

- ✚ The operator's cabins shall be properly insulated
- ✚ Provision of acoustic enclosure
- ✚ Use of Silencers
- ✚ Transportation of raw martial during day time
- ✚ High noise generating sources will be insulated
- ✚ All rotating items shall be lubricated
- ✚ Green belt shall be developed
- ✚ Ear-muffs/plugs shall be provided where ever required

### **Odor Management**

- ✚ Odor generally generated from the Biomedical waste if stored for long time
- ✚ As per New Bio-medical Rule, waste shall be treated within 48 hrs. of generation
- ✚ Regular cleaning and washing of vehicles, containers, storage area floor, and plant area
- ✚ While collection of BMW, closed containers and covered vehicles shall be used
- ✚ Personal Protective Equipment shall be provided
- ✚ Thick green belt shall be developed
- ✚ Ensure the proper housekeeping
- ✚ Proper aerobic condition will be maintained in Effluent Treatment Plant
- ✚ Continuous disposal of sludge shall be ensured
- ✚ Spraying of anti-odor chemicals wherever required

### **Occupational Safety and Health**

- ✚ Rotating equipment shall be covered to avoid the traps
- ✚ Proper training to operators and supervisors
- ✚ Regular safety training for handling of waste



- ✚ Pre - Employment & Periodical health checkup
- ✚ Provision of first aid boxes
- ✚ Emergency alarm system
- ✚ Fire hydrant, detector and Extinguishers
- ✚ Emergency preparedness plan & periodical mock drills
- ✚ Provision of PPEs as and when required

**Cost of Environmental Management Plan (EMP)**

Total 60.0 Lakhs has been secured as Capital cost of Environmental Management Plan and total 15.0 Lakhs/year as recurring cost for the same

