



Central Pollution Control Board
Zonal Office (South)
Nisarga Bhavan, Thimmaiah Road
Shiva Nagar, Bengaluru – 560010

Inspection report of M/s Medicare Environmental Management Pvt. Ltd., Common Bio-medical Waste Treatment Facility (CBWTF), Isnapur village, Medak district, Telangana State conducted during September, 2014

S.No.	Details	Particulars
01.	Name of CBWTF with contact details	M/s Medicare Environmental Management Pvt. Ltd., (Formerly Semb Ramky Environmental Management Pvt. Ltd.), Sy. No. 619, Isnapur (V), Patancheru (M), Medak District, Telangana State. Mr. A.S.Prasada Reddy, Asst. Vice President (Operations). Mob: 9849386844, Ph: 040-23015000
02.	Date of visit	02.09.2014
03.	Location of CBWTF from the residential and sensitive area. Please give details	Located in Pashamylaram Industrial Area which is 4 km away from residential area.
04.	Month / year of establishment	February, 2008
05.	CBWTF set up by	Semb Ramky Environmental Management Pvt. Ltd.
06.	CBWTF operated by	Semb Ramky Environmental Management Pvt. Ltd.
07.	Total number of healthcare facilities and beds covered (as on 02.09.2014)	No. of healthcare facilities - 716 No. of beds covered - 13079
08.	Waste treatment capacity of CBWTF (kg / day)	250 kg/hr (Presently operated at 180 kg/hr due to shortage of waste. Around 7 – 8 hrs. operation in a day).
09.	Authorization details	Validity expired on 28.02.2014. Applied for renewal and yet to receive the order.
10.	Investment in setting up the CBWTF	Rs. 2,40,30,032/- (Rupees two crore forty lakh thirty thousand thirty two only).
11.	Area of plot size for CBWTF	1 Acre
12.	Coverage area of CBWTF (radius in km covered)	130 km
13.	Name of cities / places being covered	Ranga Reddy & Hyderabad Districts
14.	Daily operation schedule (timings)	Collection – 5.00 AM – 7.00 PM Incineration – 6.00 PM – 12.00 Mid night

15.	Cost charged to the healthcare facilities	1. Govt. Hospitals(Med. Colleges) – Rs. 2/bed/day 2. Govt. Hospitals – Rs. 3/bed/day 3. SC Railway – Rs. 6.30/bed occupied/day 4. Pvt. Hospitals – Rs.3.25/bed/day(For < 100 bed) & Rs.4.00/bed/day (For more than 100 beds)
16.0	Total quantity of bio-medical waste treated (kg per day)	
16.1	Incinerable	1700 kg/day
16.2	Autoclaving	350 – 400 kg/day
16.3	Others (please specify) Sharps	15 – 20 Kg/day
17.0	Staff involvement in CBWTF operation (number of persons)	
17.1	Managerial / Administration	10 Nos.
17.2	Equipment operations	01 No.
17.3	Transportation of BMW	11 Nos. (6 drivers & 5 pickers)
17.4	Sanitation and others	08 Nos.
17.5	Security	03 Nos.
18.0	Treatment equipment installed at CBWTF	
18.1	Incinerator (capacity, make, air pollution control devices etc.)	Incinerator Capacity: 250 kg /hr. Make: Manikanda Inchin Tech Incinerator exhaust is connected to stack through APCDs such as Venturi & Wet Scrubbers.
18.2	List the shortcomings and any other observations on incineration system with reference to guidelines	Manual charging of waste in to the incinerator, is practiced instead of automatic feeding.
18.3	Details of heat recovery system installed with incinerator	Nil
18.4	Capacity of autoclave and-- make	Vacuum Type of 432 L capacity. Make: Nat Steel Equipment Pvt. Ltd.
18.5	Capacity of shredder and make	Capacity: 100 kg/hr. Make: Shiva Sayee Engg. Works
18.6	List the shortcomings and any other observations on autoclave / microwave	1. It is recorded only date, time and temperature in the Autoclave. Load identification No. and

	/ hydroclave and shredder system with reference to CPCB guidelines	<p>pressure details are not recorded.</p> <ol style="list-style-type: none"> In the autoclave, the pressure gauges placed at jacket as well as chamber are of analog type and found not working. Temperature of not less than 121°C is maintained but autoclave residence time is maintained only for 30 minutes. As the pressure gauge was found not working, the pressure maintained was not known. The rotational speed of shredder is about 100 RPM as informed by the unit. The max rotational speed should be 50 RPM to ensure better gripping and cutting of waste.
18.7	Give details of sharp pit / encapsulation facility	This facility is not available.
18.8	Give observation on vehicle / container washing facility	Satisfactory.
18.9	Water balance	
18.9.1	Source and quantity of water intake per day (cu.m / day)	Bore well (1 No.) 4 KLD
18.9.2	Break up of water usage (such as washing, scrubbing etc.)	Scrubber – 1.00 KLD Washing – 0.75 KLD Disinfections – 0.50 KLD Gardening – 1.50 KLD Domestic – 0.25 KLD
18.9.3	Total water effluent generated per day	Domestic - 0.20 KLD Industrial - 1.65 KLD
18.10	Effluent treatment plant details	Collection cum settling tank → Zig Zag System for heat reduction & solids settlement → Final collection tank → Sand filter → Carbon filter → Treated water collection tank → This treated water is reused in venturi & wet scrubbers.
18.10.1	Flow chart of ETP	ETP flow chart is enclosed here with at Annexure - 1.
18.10.2	Intake and discharge of ETP	Zero discharge
18.10.3	If treated water reused, give details. If not, mode of disposal and compliance to the regulatory requirements	Treated water is reused as scrubbing liquid in venturi & wet scrubbers.
19.0	Status of infrastructure (Yes / No)	
19.1	Treatment equipment room	Yes
19.2	Main waste storage room	Yes
19.3	Treated waste storage room	Yes
19.4	Administrative room	Yes

19.5	Generator set (size and regulatory compliance details)	82.5 KV. Acoustic barrier provided and stack height is provided as per norms.
19.6	Site security (high walls, fencing, guarded gates etc.)	Compound wall, in and out gates provided. Round the clock security provided.
19.7	Parking facility	Yes
19.8	Sign board	Sign board not available.
19.9	Green belt	Yes
19.10	Washing room	Yes
19.11	First aid box	Yes
19.12	Lighting arrangements	Yes
19.13	Odour problem remedial	Lemon grass scented phenyl applied on the floor whenever required.
19.14	Fire fighting and emergency facilities	Yes
19.15	Measures for control of pests / insects etc.	Mono croto phosphorous is sprayed to control pests/insect, if required.
19.16	Protective gear for waste handlers	Yes
19.17	Telephone facility	Yes
20.0	Record keeping details	
	Does the CBWTF operator have record keeping system as per the CPCB guidelines (waste movement records, log book for equipment, site records etc.)? Specify shortcomings observed, if any	Yes
21.0	Collection and transportation status (Yes / No)	
21.1	Whether waste collected in a container of similar colour with label as per the Rules?	Yes
21.2	Whether the person who collects BMW maintain a register with him / her?	Yes
21.3	Has due attention have been given in vehicles to prevent spillage / pilferage/ loading / unloading etc.?	Yes
21.4	Is the vehicle labeled with the symbol and display the name, address, telephone number etc.?	Yes
21.5	Does the CBWTF operator use satellite station to store the waste? If yes, give details	No

21.6	The CBWTF operator collects waste daily or alternate day? Whether criterion of 48 hours is complied?	Daily Yes																		
22.0	Disposal of treated waste																			
22.1	Plastic waste after treatment	Sent to recycler authorized by State Board																		
22.2	Treated sharps	Sent to TSDF, Dindigal, RR Dist, Telangana																		
22.3	Incineration ash	Sent to TSDF, Dindigal, RR Dist, Telangana																		
22.4	Other treated solid wastes	Sent to TSDF, Dindigal, RR Dist, Telangana																		
22.5	Oil & grease	Nil																		
22.6	Treated wastewater	Completely recycled																		
23.0	Monitoring details																			
23.1	Frequency of incinerator / autoclave / microwave / hydroclave / ETP discharge effluent testing and name of the laboratory (specify approved or not). Give details of compliance / non-compliance)	The reported frequency of monitoring was: - Stack monitoring -- Once in 6 months Waste water -- Once in 6 months Incineration ash -- Once in 6 months																		
23.2	Frequency of site inspection by SPCBs/PCCs/CPCB/any other agencies	As and when required.																		
24.0	CPCB's monitoring details																			
24.1	Incinerator stack emission (parameters stipulated in the Rules, temperature attainment in the chambers, residence time in the secondary chamber etc.)	<table border="1"> <thead> <tr> <th>Parameter</th> <th>PM</th> <th>SO₂</th> <th>HCl</th> <th>NO_x</th> <th>C.E.</th> </tr> </thead> <tbody> <tr> <td></td> <td>5136</td> <td>---</td> <td>BDL</td> <td>37</td> <td>99.99</td> </tr> <tr> <td>LIMIT</td> <td>150</td> <td>---</td> <td>50</td> <td>450</td> <td>99.00</td> </tr> </tbody> </table> <p>All values are in mg/Nm³, except CE which is in %. PM value given above is after 12% CO₂ correction.</p>	Parameter	PM	SO ₂	HCl	NO _x	C.E.		5136	---	BDL	37	99.99	LIMIT	150	---	50	450	99.00
Parameter	PM	SO ₂	HCl	NO _x	C.E.															
	5136	---	BDL	37	99.99															
LIMIT	150	---	50	450	99.00															
24.2	Incineration ash characteristics in order to conclude whether it falls under the category of hazardous waste as per the HWM Rules	Ash characteristics not carried out.																		
24.3	Validation / efficacy test of autoclave / microwave / hydroclave	Routine test using chemical indicator strip carried out by the firm during inspection showed that the specific temperature has been achieved.																		
24.4	ETP inlet characteristics																			
24.5	ETP outlet parameters (parameters as per the required regulatory requirement)	The effluent is completely recycled. There is no discharge and hence effluent sample was not collected for further analysis.																		

25.0 OBSERVATIONS:

- The unit was found in operation during inspection. The validity of combined order of consents issued under Water & Air Acts and Authorization (copy enclosed at **Annexure – 2**) was found expired on 28.02.2014. As informed by the unit that it has already applied for renewal before its expiry and yet to receive the order.
- This CBWTF has changed its name from SEMBRAMKY ENVIRONMENTAL MANAGEMENT PRIVATE LIMITED to **Medicare Environmental Management Private Limited** with effect from 23.07.2014 through Registrar of Companies, Ministry of Corporate Affairs, Govt. of India (copy of certificate enclosed at **Annexure -3**).
- Sign board was not found displayed anywhere near the entrance of the factory.
- The facility is having PLC based control system for automatic recording of operational parameters of the incinerator and found working.
- No device has been installed to measure negative draft in primary chamber, air flow rate in the incinerator chamber and pressure drop across venturi scrubber attached with the incinerator.
- The bags containing bio medical wastes are charged manually as a result there is direct exposure of furnace atmosphere to the operator. The automatic feeding device already existing there is not being used.
- Flue gas analyser is not available with the facility to measure CO, CO₂ and O₂ level in stack gases daily.
- The results of source emission monitoring carried out in the incinerator stack during inspection of the facility is given below:

Parameter	PM in mg/Nm ³ (after CO ₂ correction)	NO _x in mg/Nm ³	HCl in mg/Nm ³	O ₂ in %	CO in PPM	CO ₂ in %	CE in %
Concentration	5136	37	BDL	3	1	3	99.99
Limit	150	450	50	minimum 3	---	---	99.00

- The above stack emission monitoring results reveal that the Particulate Matter (with 12% CO₂ correction) is exceeding the emission limits prescribed under Schedule V of the BMW Rules, the value being 5136 mg/Nm³ against the limit of 150 mg/Nm³.
- The **volatile matter** of the incinerator ash got it analysed by the unit through a third party laboratory namely M/s Vitro Labs, Hyderabad during July 2014 shows that the volatile matter concentration is **1.51%** against the prescribed **standard of 0.01%**. A copy of the Test Certificate of Vitro Labs is enclosed here with at **Annexure – 4**.
- The operator of the facility is carrying out the stack emission monitoring of the incinerator stack for PM, HCl, NO_x, CO, CO₂, O₂ & CE, also, the volatile organic matter in the incinerator ash and validation test of autoclave through approved laboratory once in six months instead of quarterly for submission of the report to SPCB.

- No provision for mechanical feeding exists with the autoclave. Autoclave record shows that it records only date, time and temperature. There is no facility to record load identification number and pressure details. Pressure Gauges of Jacket as well as Chamber in the autoclave are of analog type and found not working.
- The waste is subjected to a temperature of not less than 121 °C in the autoclave but the residence time allowed is only 30 minutes.
- The rotational speed of the shredder is 100 RPM as informed by the unit. Also it was informed that the shredder is going to be replaced shortly with new one.
- Spillage of diesel near the pump that is pumping diesel to diesel tank was noticed.

26.0

RECOMMENDATIONS:

- An identification board of durable material and finish including the name of the facility, the name, address and telephone number of the operator and the prescribed authority, the hours of operation and the telephone numbers of personnel to be contacted in the event of an emergency along with hazardous waste generation & its disposal details, standards prescribed in the combined consent order etc. should be displayed at the entrance of the facility.
- Devices to measure negative draft in primary chamber, air flow rate in the incinerator chamber and pressure drop across venturi scrubber attached with the incinerator should be installed.
- Manual charging of bio medical waste in to the incinerator should be prevented in order to avoid the direct exposure of operator to the furnace atmosphere. The automatic feeding device already existing there should be used.
- Flue gas analyser must be available with the operator of the facility to measure CO, CO₂ and O₂ levels in stack gases daily.
- The unit must take control measures to bring the Particulate Matter emission level from the incinerator stack and volatile organic matter from incinerator ash within the prescribed level.
- Provision should be made available with the autoclave for mechanical feeding. Existing facility should be upgraded in order to record pressure details and load identification number along with date, time and temperature.
- The waste should be subjected to **i)** a temperature of not less than 121 °C and pressure of 15 psi per an autoclave residence time of not less than 45 minutes **or ii)** a temperature of not less than 135 °C and pressure of 31 psi per an autoclave residence time of not less than 30 minutes in the case of vacuum autoclave possessed by the unit.
- The operator of the facility should carry out the stack emission monitoring of the incinerator stack for PM, HCl, NO_x, CO, CO₂, O₂ & CE, also, the volatile organic matter in the incinerator ash, validation test of autoclave and applicable parameters for liquid effluent, if discharged, through approved laboratory and submit the quarterly report to SPCB as prescribed in the guidelines for CBWTFs.
- The shredder should have low rotational speed (maximum 50 RPM) for better gripping and cutting of the bio-medical waste.
- The operator of this facility should ensure that spillage of oil does not takes place anywhere inside the premises.

27.0	Date of Inspection	September 02, 2014
	Name and Designation of Inspecting officers	1. Mr. S Jeyapaul, Scientist 'C', CPCB, Bangalore 2. Mr. A.Gnanavelu, SSA, CPCB, Bangalore 3. Mr. Mr.G.Narsimhulu, Analyst, APPCB, RO, SRD, Medak Dist.
28.0	Signature of the officer	(S.Jeyapaul) Scientist `C`
29.0	Action Suggested by ZO: The facility should be instructed to comply with all points made in the recommendations immediately and submit the ATR endorsed through local SPCB. Then CPCB Shall make surprise inspection of the facility to ascertain the compliance status.	
	(S. Suresh) Zonal Officer	



Central Pollution Control Board
Zonal Office (South)
Nisarga Bhavan, Thimmaiah Road
Shiva Nagar, Bengaluru – 560010

Inspection report of M/s G.J.Multiclave India Pvt. Ltd., Common Bio-medical
Waste Treatment Facility (CBWTF), Edulapally village, Mahaboob Nagar district,
Telangana State conducted during September, 2014

S.No.	Details	Particulars
01.	Name of CBWTF with contact details	M/s G.J.Multiclave India Pvt. Ltd., Sy. No. 179 & 181, Edulapally (V), Kothur (M), Mahaboob Nagar District, Telangana State Mr. S.Chandra Sekar Factory Manager Mob: 9866699351
02.	Date of visit	03.09.2014
03.	Location of CBWTF from the residential and sensitive area. Please give details	Located 2 km away from any residential area.
04.	Month / year of establishment	October, 2000
05.	CBWTF set up by	M/s G.J.Multiclave India Pvt. Ltd.
06.	CBWTF operated by	M/s G.J.Multiclave India Pvt. Ltd.
07.	Total number of healthcare facilities and beds covered (as on 02.09.2014)	No. of healthcare facilities - 876 No. of beds covered - 17303
08.	Waste treatment capacity of CBWTF (kg / day)	There are two incinerators. Each one is having a capacity of 200 kg/hr
09.	Authorization details	Valid till 31.12.2014.
10.	Investment in setting up the CBWTF	1.6 crore
11.	Area of plot size for CBWTF	4 Acres
12.	Coverage area of CBWTF (radius in km covered)	60 km
13.	Name of cities / places being covered	Ranga reddy & Hyderabad Districts
14.	Daily operation schedule (timings)	Collection – 5.30 AM – 6.00 PM Incineration – 7.00 PM – 7.00 AM
15.	Cost charged to the healthcare facilities	1. Rs. 3.50/bed/day (when no. of beds > 10) 2. Rs. 5.00/bed/day (For new hospitals having beds > 10) 3. Rs. 1000/month (For dental & diagnostic centers)
16.0	Total quantity of bio-medical waste treated (kg per day)	kg/day (avg.)
16.1	Incinerable	3250 kg/day
16.2	Autoclaving	1250 kg/day
16.3	Others (please specify)	

	Tablets, fluids & baby food items	30 Tons/month
17.0	Staff involvement in CBWTF operation (number of persons)	
17.1	Managerial / Administration	4 Nos.
17.2	Equipment operations	06 No.
17.3	Transportation of BMW	24 Nos.
17.4	Sanitation and others	10 Nos.
18.0	Treatment equipment installed at CBWTF	
18.1	Incinerator (capacity, make, air pollution control devices etc.)	Each incinerator Capacity: 200 kg /hr. Make: Tech Max, Hyderabad Incinerator exhaust is connected to stack through APCDs such as Quench Column, packed scrubber & droplet separator.
18.2	List the shortcomings and any other observations on incineration system with reference to guidelines	Manual charging of waste in to the incinerator, noticed instead of automatic feeding.
18.3	Details of heat recovery system installed with incinerator	Nil
18.4	Capacity of autoclave and-- make	Vacuum Type of 800 L capacity. Make: NATPSTEL, Bombay
18.5	Capacity of shredder and make	Capacity: 100 kg/hr. Make: Techmax
18.6	List the shortcomings and any other observations on autoclave / microwave / hydroclave and shredder system with reference to CPCB guidelines	1. It is recording only date, time and temperature in the Autoclave. Load identification No. and pressure details are not recorded. 2. Temperature of not less than 121°C is maintained but autoclave residence time is maintained only for 30 minutes. 3. The rotational speed of shredder is about 300 RPM as informed by the unit. The max rotational speed should be 50 RPM to ensure better gripping and cutting of waste.
18.7	Give details of sharp pit / encapsulation facility	Concrete tubs of size 5` x 2` x 2` are made. These tubs are filled with sharps and glass ampoules. Then top layer of the tubs are concreted. These are now used as sitting benches.
18.8	Give observation on vehicle / container washing facility	Satisfactory.
18.9	Water balance	
18.9.1	Source and quantity of water intake per day (cu.m / day)	Bore well (1 No.) 13 KLD
18.9.2	Break up of water usage (such as washing, scrubbing etc.)	Scrubber – 9.00 KLD Washing & Disinfections – 2.00 KLD Gardening – 1.00 KLD Domestic – 1.00 KLD
18.9.3	Total water effluent generated per day	Domestic - 0.75 KLD Industrial - 4.50 KLD
18.10	Effluent treatment plant details	Collection cum settling tanks(3 nos. one each for floor washing, vehicle washing & scrubbing) → Chemical mixing tank(Hypo+caustic+lime added)

		→ Sedimentation tank → Final collection sump → Multimedia Filter → This treated water is reused in scrubbers.
18.10.1	Flow chart of ETP	Not provided
18.10.2	Intake and discharge of ETP	Zero discharge
18.10.3	If treated water reused, give details. If not, mode of disposal and compliance to the regulatory requirements	Treated water is reused as scrubbing liquid in scrubbers
19.0	Status of infrastructure (Yes / No)	
19.1	Treatment equipment room	Yes
19.2	Main waste storage room	No
19.3	Treated waste storage room	Yes
19.4	Administrative room	Yes. But need to be upgraded and provided with wash room.
19.5	Generator set (size and regulatory compliance details)	125 KV. It is under maintenance. During inspection it was noticed the presence of hired one of capacity 125 KV.
19.6	Site security (high walls, fencing, guarded gates etc.)	Yes
19.7	Parking facility	Yes
19.8	Sign board	Small sign board with insufficient information is available there.
19.9	Green belt	Yes
19.10	Washing room	Yes; Very poorly maintained.
19.11	First aid box	Yes
19.12	Lighting arrangements	Yes
19.13	Odour problem remedial	Yes
19.14	Fire fighting and emergency facilities	Yes
19.15	Measures for control of pests / insects etc.	Yes
19.16	Protective gear for waste handlers	Yes
19.17	Telephone facility	Yes
20.0	Record keeping details	
	Does the CBWTF operator have record keeping system as per the CPCB guidelines (waste movement records, log book for equipment, site records etc.)? Specify shortcomings observed, if any	Yes
21.0	Collection and transportation status (Yes / No)*	
21.1	Whether waste collected in a container of similar colour with label as per the Rules?	Yes
21.2	Whether the person who collects BMW maintain a register with him / her?	Yes
21.3	Has due attention have been given in vehicles to prevent spillage / pilferage/ loading / unloading etc.?	Yes

21.4	Is the vehicle labeled with the symbol and display the name, address, telephone number etc.?	Yes																		
21.5	Does the CBWTF operator use satellite station to store the waste? If yes, give details	No																		
21.6	The CBWTF operator collects waste daily or alternate day? Whether criterion of 48 hours is complied?	Daily Yes																		
22.0	Disposal of treated waste																			
22.1	Plastic waste after treatment	Sent to M/s Subramanieshwara Scrap Plastic Industries, Shad Nagar.																		
22.2	Treated sharps	Encapsulated as described above at Sl. No. 18.7																		
22.3	Incineration ash	Sent to TSDF, Dindigal, RR Dist, Telangana																		
22.4	Other treated solid wastes	Nil																		
22.5	Oil & grease	Nil																		
22.6	Treated wastewater	Completely recycled																		
23.0	Monitoring details																			
23.1	Frequency of incinerator / autoclave / microwave / hydroclave / ETP discharge effluent testing and name of the laboratory (specify approved or not). Give details of compliance / non-compliance)	The reported frequency of monitoring was: - Stack monitoring -- Once in 6 months Waste water -- Once in 6 months Incineration ash -- Once in 6 months																		
23.2	Frequency of site inspection by SPCBs/PCCs/CPCB/any other agencies	As and when required																		
24.0	CPCB's monitoring details																			
24.1	Incinerator stack emission (parameters stipulated in the Rules, temperature attainment in the chambers, residence time in the secondary chamber etc.)	<table border="1"> <thead> <tr> <th>Parameter</th> <th>PM</th> <th>SO₂</th> <th>HCl</th> <th>NO_x</th> <th>C.E. %</th> </tr> </thead> <tbody> <tr> <td>Concentration</td> <td>1408</td> <td>---</td> <td>BDL</td> <td>8</td> <td>99.92</td> </tr> <tr> <td>Limit</td> <td>150</td> <td>---</td> <td>50</td> <td>450</td> <td>99.00</td> </tr> </tbody> </table> <p>All values are in mg/Nm³ except CE that is in % PM value given above is with 12% CO₂ correction</p>	Parameter	PM	SO ₂	HCl	NO _x	C.E. %	Concentration	1408	---	BDL	8	99.92	Limit	150	---	50	450	99.00
Parameter	PM	SO ₂	HCl	NO _x	C.E. %															
Concentration	1408	---	BDL	8	99.92															
Limit	150	---	50	450	99.00															
24.2	Incineration ash characteristics in order to conclude whether it falls under the category of hazardous waste as per the HWM Rules	Ash characteristics not carried out.																		
24.3	Validation / efficacy test of autoclave / microwave / hydroclave	Routine test using chemical indicator strip carried out by the firm during inspection showed that the specific temperature has been achieved.																		
24.4	ETP inlet characteristics																			
24.5	ETP outlet parameters (parameters as per the required regulatory requirement)	The effluent is completely recycled. There is no discharge and hence effluent sample was not collected for further analysis.																		

25.0**OBSERVATIONS:**

- The unit was found in operation during inspection. The validity of combined order of consents issued under Water & Air Acts and Authorization (copy enclosed at **Annexure – 1**) is valid till 31.12.2014.
- Sign board displayed at the entrance of the factory was found very small and hardly contain any information except the name of the unit.
- The facility is having PLC based control system for automatic recording of operational parameters of the incinerator and found working.
- Devices to measure negative draft in primary chamber, air flow rate in the incinerator chamber and pressure drop across venturi scrubber attached with the incinerator have not been installed.
- The bags containing bio medical wastes are charged manually as a result there is direct exposure of furnace atmosphere to the operator.
- Flue gas analyser is not available with the facility to measure CO, CO₂ and O₂ level in stack gases daily.
- The results of source emission monitoring carried out in the incinerator stack during inspection of the facility is given below:

Parameter	PM in mg/Nm ³ (after CO ₂ correction)	NO _x in mg/Nm ³	HCl in mg/Nm ³	O ₂ in %	CO in PPM	CO ₂ in %	CE in %
Concentration	1408	8	7	3.6	17	2.6	99.92
Limit	150	450	50	minimum 3	---	---	99.00

- The above stack emission monitoring results reveal that the Particulate Matter (with 12% CO₂ correction) is exceeding the emission limits prescribed under Schedule V of the BMW Rules, the value being 1408 mg/Nm³ against the limit of 150 mg/Nm³.
- The **volatile matter** of the incinerator ash got it analysed by the unit through a third party laboratory namely M/s Hyderabad Waste Management Project, Dundigal, Hyderabad during April, 2014 shows that the volatile matter concentration is **2.93 %** against the prescribed **standard of 0.01%**. A copy of the Test Certificate of M/s Hyderabad Waste Management Project is enclosed here with at **Annexure – 2**.
- The operator of the facility is also receiving expired medicines (Tablets & Fluids) and baby foods of approximately 30 Tons per month from 11 Pharmaceutical firms located in Hyderabad area for incineration. It was noticed during inspection that huge quantities of such items had been dumped haphazardly in a temporary shed.
- The operator of the facility is carrying out the stack emission monitoring of the incinerator stack for PM, HCl, NO_x, CO, CO₂, O₂ & CE, also, the volatile organic matter in the incinerator ash and validation test of autoclave through approved laboratory once in six months instead of quarterly for submission of the report to SPCB.
- Plastic waste after treatment is sent to M/s Subramanieshwara Scrap Plastic Industries, Shad Nagar which is not an authorized recycler.

- Main waste storage room is not available. Administrative room is poorly maintained without any wash room. The wash room located somewhere else is poorly maintained.
- No provision for mechanical feeding exists with the autoclave. Autoclave record shows that it records only date, time and temperature. There is no facility to record load identification number and pressure details.
- The waste is subjected to a temperature of not less than 121 °C in the autoclave but the residence time allowed is only 30 minutes.
- The rotational speed of the shredder is about 300 RPM as informed by the unit. More noise was observed during its operation.

26.0

RECOMMENDATIONS:

- An identification board of durable material and finish including the name of the facility, the name, address and telephone number of the operator and the prescribed authority, the hours of operation and the telephone numbers of personnel to be contacted in the event of an emergency along with hazardous waste generation & its disposal details, standards prescribed in the combined consent order etc. should be displayed at the entrance of the facility.
- Devices to measure negative draft in primary chamber, air flow rate in the incinerator chamber and pressure drop across venturi scrubber attached with the incinerator should be installed.
- Manual charging of bio medical waste in to the incinerator should be prevented in order to avoid the direct exposure of operator to the furnace atmosphere. The automatic feeding device should be used.
- The operator of the facility must have Flue gas analyser to measure CO, CO₂ and O₂ levels in stack gases daily.
- The unit must take control measures to bring down the Particulate Matter emission level from the incinerator stack and volatile organic matter from incinerator ash within the prescribed level.
- Provision should be made available with the autoclave for mechanical feeding. Existing facility should be upgraded in order to record pressure details and load identification number along with date, time and temperature.
- The waste should be subjected to **i)** a temperature of not less than 121 °C and pressure of 15 psi per an autoclave residence time of not less than 45 minutes **or ii)** a temperature of not less than 135 °C and pressure of 31 psi per an autoclave residence time of not less than 30 minutes in the case of vacuum autoclave possessed by the unit.
- The operator of the facility should carry out the stack emission monitoring of the incinerator stack for PM, HCl, NO_x, CO, CO₂, O₂ & CE, also, the volatile organic matter in the incinerator ash, validation test of autoclave and applicable parameters for liquid effluent, if discharged, through approved laboratory and submit the quarterly report to SPCB as prescribed in the guidelines for CBWTFs.
- The shredder should have low rotational speed (maximum 50 RPM) for better gripping and cutting of the bio-medical waste.
- The treated plastic waste must be sent to the authorized recyclers only.

	<ul style="list-style-type: none"> ➤ Main waste storage room should be provided. Administrative room needs to be upgraded with a provision for wash room. The existing wash room requires to be upgraded and steps must be taken to maintain neatly. ➤ To receive and process the expired medicines & baby foods for incineration from pharmaceutical firms, necessary permission and Authorization should be obtained from local SPCB. As the huge quantity of these items was found dumped in a temporary shed, there is every possibility for fire accident. Similarly the pharmaceutical firms disposing their expired medicines & baby food items to CBWTF should be asked to take permission and authorization from local SPCB to have accountability on the issue. 	
27.0	Date of Inspection	September 03, 2014
	Name and Designation of Inspecting officers	1. Mr. S Jeyapaul, Scientist 'C', CPCB, Bangalore 2. Mr. A.Gnanavelu, SSA, CPCB, Bangalore 3. Mrs. Joshna, AE, APPCB, RO, Hyderabad
28.0	Signature of the officer	(S.Jeyapaul) Scientist `C`
29.0	Action Suggested by ZO: The facility should be instructed to comply with all points made in the recommendations immediately and submit the ATR endorsed through local SPCB. Then CPCB Shall make surprise inspection of the facility to ascertain the compliance status.	
		(S. Suresh) Zonal Officer

CENTRAL POLLUTION CONTROL BOARD
ZONAL OFFICE (SOUTH), BANGALORE

Tech/24/Bio Med.(Telangana)/ZOB/2014-15/

November 11, 2014

To

The Member Secretary
Central Pollution Control Board
Parivesh Bhawan, East Arjun Nagar
Delhi-110 032

Kind Attention: Incharge, HWMD, CPCB, Delhi

Sub: Inspection reports of Common Bio-Medical Waste Treatment Facilities (CBWTFs) of Telangana State.

Sir,

With reference to above , the following CBWTFs located in Telangana State were inspected by a team of officials from this office during September 02-03, 2014 under the project Monitoring of Common Bio-Medical Waste Treatment Facilities in the Zone as a part of AAP for this FY 2014-15:

1. M/s Medicare Environmental Management Pvt. Ltd.,
(Formerly Semb Ramky Environmental Management Pvt. Ltd.)
Isnapur (V), Patancheru (M), Medak District, Telangana State.
2. M/s G.J.Multiclave India Pvt. Ltd.,
Edualapally (V), Kothur (M),
Mahaboob Nagar District, Telangana State.

The two inspection reports of CBWTFs are herewith submitted for kind perusal, pl.

Encl: As above

Yours faithfully

(S. Suresh)
Zonal Officer