

NILESH R. PANDYA
 NOTARY
 GOVT. OF INDIA

BEFORE THE NATIONAL GREEN TRIBUNAL 6 DEC 2025
 PRINCIPAL BENCH, NEW DELHI

ORIGINAL APPLICATION NO. 247 OF 2024 (PB)

NEWS ITEM TITLED "AHMEDABAD SURAT LANDFILLS
 AMONG WORST THREE METHANE HOT SPOT IN INDIA"

**AFFIDAVIT ON BEHALF OF GUJARAT POLLUTION CONTROL
 BOARD - RESPONDENT NO. 4**

I, **Smt. Shivani Bhargava**, adult, having my office at **Gandhinagar**, do
 hereby solemnly affirm and state an oath as under:

1. I am presently serving as **Environment Engineer and (I/c) Unit
 Head- MSW** with Gujarat Pollution Control Board. I am authorized to
 swear the present affidavit on behalf of the Gujarat Pollution Control
 Board and am otherwise competent to make the present affidavit in
 capacity of In-charge Unit Head (MSW).

2. I am filing the present affidavit in compliance with order dated
 10.09.2025 by which the answering respondent has been directed to
 place on record the action taken by the Board.

I say that by order dated 05.07.2025 this Hon'ble Court directed filing
 of a Joint Committee Report on the issue of emission of high-level
 methane gas from landfill sites. The report came to be submitted
 before this Hon'ble Tribunal, wherein the Regional Officer of the
 Gujarat Pollution Control Board was also a member. The findings and
 conclusions of the Joint Committee Report are as follows:

"a) Methane generation at the hotspots reported in the IIRS report
 may have correlation to the SWM facilities / O&G establishments
 operational at these sites.

b) It is observed that fresh waste is still being disposed at three
 identified dumpsites viz. (Chirawa, Taranagar & Deonar). Concerned

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SPCBs to ensure that fresh municipal solid waste is not dumped at these sites.

c) It is observed that bioremediation has been completed only at one of the six dumpsites included in this report. As per provision of SWM Rules, 2016 bioremediation was to be completed by April 07, 2021. Hon'ble NGT has issued several directions to the concerned State Authorities for bioremediation of the dumpsites stipulating timeframe. Directions dated January 27, 2021 have also been issued by CPCB for bioremediating sites. In view of above, concerned local authorities are required to submit their action plan for biomining of legacy waste dumpsites. The State Urban Development Department to monitor the implementation in a time bound manner. The concerned SPCBs to ensure implementation in their respective States.

d) Methane detectors have not been installed at any of the dumpsites. Methane detectors at appropriate locations to be installed & necessary fire preventive measures to be implemented at all dumpsites. Directions dated 26.5.2022 have been issued by CPCB under E(P) Act, 1986 to all SPCBs/PCCs for implementation of measures for prevention of fire accidents at dumpsites. Compliance of the same is to be ensured by the concerned SPCBs.



e) Methane monitoring data is not available for any of the six dumpsites, covered in this report. Regular Monitoring of methane at source needs to be carried out at the dumpsites till bioremediation is completed at these sites. Quarterly monitoring reports to be submitted to the concerned SPCBs. CPCB's Report on "Status of Methane Emission from MSW disposal sites" may be referred to for the purpose.

f) Details of waste disposed at the SLF to be maintained and only segregated inert waste to be permitted to be dumped at the Sanitary Landfill sites in accordance with 15 (zi) of the SWM Rules 2016.

g) Methane monitoring data is not available for any of the two SLFs, covered in this report. Regular Monitoring of methane at these sites be carried out to ensure compliance with lower explosive limit (LEL) in accordance with Schedule I (F)(ii) of SWM Rules. Quarterly monitoring reports to be submitted to the concerned SPCBs.

h) Regular Ambient Air Quality Monitoring to be conducted at SLF Sites as per clause (F) of Schedule I of SWM Rules, 2016 and quarterly reports to be submitted to the SPCB/PCC.

i) It was observed that gas collection system has been installed at the SLF of Kanjurmarg, but not at Pimpri Chinchwad, Pune. Necessary steps to be taken for Collection and Utilization for energy / flaring of methane gas at SLF as per Schedule I (F) (ii) of SWM Rules, 2016.

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j) The SLFs should install Leakage detection and repair system and undertake preventive maintenance of the Methane collection and utilization system ensuring that the concentration of methane gas generated at landfill site shall not exceed 25 per cent of the lower explosive limit (LEL) as stipulated under Schedule I (F) (ii) of SWM Rules, 2016..."

4. In view of the above, the officials of Gujarat Pollution Control Board carried out an inspection at the Pirana dump site in Ahmedabad on 21.11.2025. During the visit it was observed that there were no methane gas detectors or fire prevention systems were installed at site. Accordingly, a show cause notice was issued to the Ahmedabad Municipal Corporation in order to submit a time-bound action plan for better management of the waste site and for immediately resolving the issue of methane gas emission. A copy of show-cause notice dated 21.11.2025 issued to the Ahmedabad Municipal Corporation subsequent to the site visit is also annexed herewith and marked as **Annexure R-1.**

5. The officials of the Gujarat Pollution Control Board also carried out a site visit to Khajod dumping site in Surat on 18.11.2025. It was noticed that "the site is capped with gas collection and leachate treatment systems; however, methane detectors are not installed." Thus, no data was available for monitoring of methane emissions. Accordingly, the Board issued a show-cause notice dated 24.11.2025 to the Surat Municipal Corporation to rectify the non-compliances and install a methane monitoring system. A copy of show-cause notice dated 24.11.2025 issued to the Surat Municipal Corporation subsequent to the site visit is also annexed herewith and marked as **Annexure R-2.**

6. The Ahmedabad Municipal Corporation and Surat Municipal Corporation have both submitted an action plan to the Board for its consideration. A copy of action plans submitted by the corporations is annexed herewith and marked as **Annexure R-3 (Colly).**

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7. The Board assures that it shall abide by all or any directions which are issued by this Hon'ble Tribunal and take steps against the erring unit strictly in accordance with law.

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DEPONENT



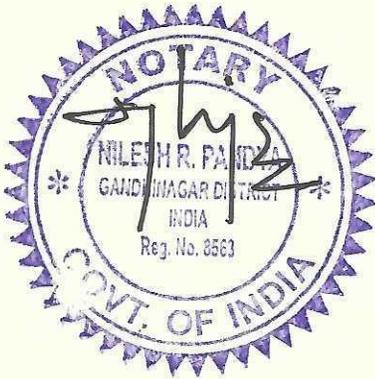
VERIFICATION

of both

Verified at Gandhinagar on this 06 day of December, 2025 that the contents of the above affidavit are true and correct, nothing stated therein is false and nothing material has been concealed therefrom.

Margava

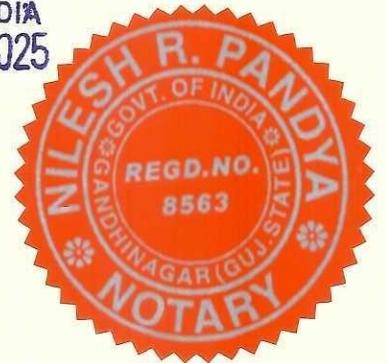
DEPONENT



IDENTIFIED BY ME SOLEMNLY AFFIRMED BEFORE ME

ADVOCATE/PERSON
NAME: *J. Mohanraj*
ADD: *GANDHINAGAR*
DATE: *06/12/25*
- 6 DEC 2025

J. Mohanraj
NILESH R. PANDYA
NOTARY
GOVT. OF INDIA
- 6 DEC 2025





605 GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,

GANDHINAGAR - 382010,

(T) 079-23232152

SHOW CAUSE NOTICE

(Under The Environment (P) Act, 1986 for the violation of Solid Waste Management Rules, 2016)

WHEREAS you are responsible for Management and handling of the Solid Waste generating from your jurisdiction as per The Solid Waste Management Rules, 2016.

AND WHEREAS, the Solid Waste Management Rules, 2016, notified by Ministry of Environment, Forest and Climate Change under the Environment (Protection) Act, 1986, lay down specific duties for local bodies, waste processing facility operators, and regulatory authorities including CPCB, SPCBs, and PCCs for safe and scientific management of solid waste; and

AND WHEREAS, under the provisions of the Solid Waste Management Rules, 2016, every operator of a waste processing and disposal facility, including a Waste-to-Energy Plant, is required to comply with the duties and responsibilities specified therein;

AND WHEREAS, Board has issued Notice of Direction under section 31-A of The Air (P &CP) Act, 1981 on 30.04.2025 to bring your attention for necessary compliance of aforesaid rule.

AND WHEREAS, Ahmedabad Municipal Corporation's solid waste Dump site located in Pirana was inspected on 21.11.2025 by the officers of the Board and it was observed that:

1. Dumping of solid waste is going on.
2. Rag pickers collect recyclable waste as well as stray animals like dogs are observed at dumping site.
3. Methane gas detectors, fire prevention systems, Methane gas collection system and Methan gas utilization system not yet installed at this dump site. AMC has not submitted time bound action plan for same.
4. You have failed to comply with the Notice of Direction issued under section 31-A of The Air (P &CP) Act, 1981 on 30.04.2025.

Now therefore, you are hereby directed to show cause in writing within 7 days from the date of receipt of this notice as to why action should not be initiated against you under the provisions of the Solid Waste Management Rules, 2016 read with the Environment (Protection) Act, 1986 for the above violation.

For and on behalf of
Gujarat Pollution Control Board


(Smt. A. J. Patel)
EE & Unit Head, MSW

NO: GPCB/CCA/MSW- 58(8)/PCB ID-40728/SCN- 880963

DATE: 24 NOV 2025

✓ ISSUED TO:

The Municipal Commissioner,
Ahmedabad Municipal Corporation,
Ahmedabad.

COPY TO:

- 1. Project Manager (SWM),**
Swachh Bharat Mission Urban-Gujarat, Gujarat Municipal Finance Board Office, Sector 10
A, Gandhinagar-382010..... For information & necessary action.
- 2. The Regional Officer, GPCB**
2nd Floor, old Building, Sector 10 A, Gujarat Pollution Control Board, Gandhinagar-
382010..... For information & necessary action.



GUJARAT POLLUTION CONTROL BOARD

PARYAVARAN BHAVAN, SECTOR 10-A,

GANDHINAGAR - 382010,

(T) 079-23232152

SHOW CAUSE NOTICE

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WHEREAS you are responsible for Management and handling of the Solid Waste generating from your jurisdiction as per The Solid Waste Management Rules, 2016.

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AND WHEREAS, under the provisions of the Solid Waste Management Rules, 2016, every operator of a waste processing and disposal facility, including a Waste-to-Energy Plant, is required to comply with the duties and responsibilities specified therein;

AND WHEREAS, Board has granted authorization under the Solid Waste Management Rules, 2016 subject to comply direction given by Hon'ble NGT in the matter O.A 247/24 & 606/18.

AND WHEREAS, Surat Municipal Corporation's solid waste Dump site located in Khajod was inspected on **18.11.2025** by the officers of the Board and it was observed that:

1. This capped site is provided with gaseous vents, a leachate collection system and grass turfing on the upper surface. However, the facility does not have a methane monitoring/ detection system, nor any methane utilization or safe disposal mechanism in place.
2. Fire-fighting and fire prevention arrangements are also not available on-site.
3. SMC has submitted action plan for controlling methane gas from landfill site however, time bound action plan is not mentioned in it.

Now therefore, you are hereby directed to show cause in writing within 7 days from the date of receipt of this notice as to why action should not be initiated against you under the provisions of the Solid Waste Management Rules, 2016 read with the Environment (Protection) Act, 1986 for the above violation.

**For and on behalf of
Gujarat Pollution Control Board**

Ajane
22/11/25
(Smt. A. J. Patel)
EE & Unit Head, MSW

NO: GPCB/CCA/MSW- 83(7)/PCB ID-43507/SCN- 880965

DATE: 24 NOV 2025

ISSUED TO:

✓ **The Municipal Commissioner,**
Surat Municipal Corporation,
Surat.

COPY TO:

- 1. Project Manager (SWM),**
Swachh Bharat Mission Urban-Gujarat, Gujarat Municipal Finance Board Office,
Sector 10 A, Gandhinagar-382010..... For information & necessary action.
- 2. The Regional Officer, GPCB**
Plot No.11-12/2,3, GIDC Panesara, Surat-394221..... For information¹ &
necessary action.

**ACTION PLAN SUBMITTED BY AHMEDABAD MUNICIPAL CORPORATION****Executive Summary**

Methane emissions from landfill sites are a major environmental concern, contributing significantly to climate change and local air quality issues. The Ahmedabad Municipal Corporation (AMC) is committed to minimising methane emissions from the city's landfill site through a comprehensive set of measures aligned with the Solid Waste Management Rules, 2016. This action plan outlines the background, current practices, and future strategies for methane control, environmental safety, and sustainable waste management in Ahmedabad.

1. Background

Ahmedabad is one of India's largest urban centres, with a rapidly growing population and corresponding increase in solid waste generation. The AMC is responsible for the collection, transportation, processing, and disposal of municipal solid waste, in compliance with the Solid Waste Management Rules, 2016. On average, Ahmedabad generates approximately 3500-3800 metric tonnes of solid waste (including C&D Waste) daily, a significant portion of which is disposed of at Processing Plants. AMC's action plan prioritises both regulatory compliance and environmental stewardship in managing these challenges.

2. Methane Mitigation Practices**2.1 Source Segregation and Material Recovery**

AMC has implemented 100% door-to-door waste collection with emphasis on source segregation into biodegradable and non-biodegradable fractions. Segregation at source enables more efficient recovery of recyclables and reduces the organic load at the landfill, directly lowering methane generation. 9 Material Recovery Facilities (MRFs) have been established across the city to further sort and recover valuable materials from mixed waste streams.

2.2 Food and Garden Waste Management

To address organic waste, AMC promotes onsite composting in residential societies, markets, and institutions. Dedicated collection services for garden waste and food scraps are in place, diverting this high-methane potential material from the landfill. Community composting pits and decentralized composting units have been established for efficient processing.

3. Dedicated Waste Processing Facilities

AMC has invested in a range of waste processing facilities, ensuring scientific handling and minimization of landfill-bound waste. The following table summarizes the key facilities and their roles:

Sr. No.	Name of Agencies	Treatment	Processing Capacity (TPD)
1.	Bharuch Enviro Engineers Ltd.	Waste to compost and RDF	330 TPD
2.	Creative Ecoport Pvt Ltd	Waste to compost	450 TPD
3.	AMC Waste to compost (Excel)	Waste to compost	330 TPD
4.	M V Desai J/V PSS (AMC)	Waste to compost	500 TPD
5.	GGEPIIL	RDF/Dry waste	500 TPD
6.	Neptra Resources Ltd.	Plastic Waste Management	100 TPD
7.	Amdavad Enviro Projects Pvt. Ltd.	C&D Waste processing	1000 TPD
8.	Jindal Infra Projects Ltd.	Waste to Energy	1000 TPD
Total Capacity			4210 TPD



Action Plan Report for **610** Controlling Methane Gas Emissions from Ahmedabad Landfill Site



These facilities enable AMC to divert substantial waste away from the landfill, reducing the organic fraction and subsequent methane emissions. Future Projects by Ahmedabad Municipal Corporation:

Sr. No.	Name of Agencies	Treatment	Processing Capacity (TPD)
1.	Abellon Clean Energy Ltd.	Waste to Energy	1000
2.	Ecovision LLP	Plastic Waste Management	100
3.	Envigenic Pvt Ltd	Torrefaction (Waste to Coal)	300
4.	Steam House India Pvt Ltd	Waste to Steam	300
5.	NAFED	BioCNG (Wet waste)	500
6.	Adani Total Gas Ltd.	Biomethanation	500
7.	Gujarat KamdarSahkariMandli Ltd.	C&D Waste processing	1000
8.	Vardayini Enterprise LLP (A'bad West) & Gujarat KamdarSahkariMandli Ltd (A'bad East)	Garden Waste Processing	200
9.	Omkar Enterprise (A'bad West) & Omkar Enterprise (A'bad East)	Religious waste processing	02
10.	Bio CNG	Under Tendering Stage	100
11.	Waste to Compost	Tender Under Evaluation	1000
12.	Material Recovery Facility	Under Tendering Stage	500
Total Capacity			5502 TPD

4. Remediation of Legacy Waste

Legacy waste, or old waste deposited over years, was a significant source of landfill methane. AMC has undertaken bio-mining projects to excavate, process, and scientifically dispose of legacy waste. Progress includes:

- Excavation and processing of over 126 lakh Metric ton of legacy waste since 2019 onwards.
- Recovery of recyclable materials and compostable fractions further used in Road Projects and Filling of Low Lying Areas.
- Reclamation of landfill land for future use or greening
- Reduction in odor, fire risk, and uncontrolled gas emissions at the site
- Land reclaimed through bio-mining is being converted into green spaces with more than 4000 trees plantes, further enhancing environmental quality.

5. Mission 4 Million Trees: Tree Plantation Initiative

To offset greenhouse gas emissions and improve air quality, AMC has launched the 'Mission 4 Million Trees' programme. Key highlights include:

- Planting of more than 40 lakh (4 million) trees across Ahmedabad, with a focus on landfill peripheries, reclaimed land and other areas of the City in Year 2025.
- Selection of native and resilient species for maximum survival and ecological benefit
- Community involvement through plantation drives in schools, parks, and residential areas
- Ongoing maintenance and survival monitoring to ensure long-term impact
- This large-scale plantation not only sequesters carbon but also acts as a buffer to reduce dust and odor around landfill sites.



Action Plan Report for Controlling Methane Gas Emissions from Ahmedabad Landfill Site



6. Efficient Landfill Design and Operation

- AMC has adopted scientific landfill management practices to control emissions and ensure environmental safety:
- Daily compaction and covering of waste to minimize air contact and methane release
- Installation of gas venting and collection systems to safely manage landfill gases
- Leachate collection and treatment infrastructure to prevent groundwater contamination
- Periodic monitoring of gas emissions, groundwater, and ambient air quality as per regulatory standards
- Use of engineered liners and impermeable covers for new landfill cells
- As the current landfill site is nearing completion, work on the development of a new landfill has already commenced, and Environmental Clearance (EC) has been granted for the project.

7. Community Outreach and Education

Public participation is crucial for effective methane control. AMC's outreach efforts include:

- Awareness campaigns on waste segregation, composting, and environmental health
- Workshops and training for residents, school students, and bulk waste generators
- Partnerships with NGOs and community groups to promote sustainable waste practices
- Grievance redressal mechanisms and helplines for prompt response to community concerns
- These initiatives foster a culture of environmental responsibility and ensure sustained community engagement.

8. Strategy for Methane Emission Control

The Ahmedabad Municipal Corporation (AMC) is committed to transitioning from passive management to active resource recovery and rigorous environmental control to suppress methane emissions. This strategy focuses on enhancing site safety and maximizing the utilization of generated gas. Furthermore, AMC is currently processing 1000 TPD of MSW through Waste to Energy. By this way of processing approx. 7848 tons of greenhouse gas emission is reduced from November 2024 to till date.

1. Advanced Methane Detection and Monitoring

- **Expansion of Air Quality Parameters:** The AMC will expand routine Ambient Air Quality Monitoring to specifically include Methane as a critical parameter, allowing for real-time risk assessment.
- **Hotspot Identification:** Periodic, targeted mobile surveys will be employed using high-precision portable analyzers to efficiently identify and catalogue potential methane hotspots and track seasonal variations in gas generation.

2. Prevention through Operational Excellence

- **Controlled Tipping and Compaction:** Strict operational protocols will enforce controlled tipping and maximum waste compaction to eliminate the formation of gas pockets within the fill.
- **Moisture and Cover Regulation:** Consistent application of daily/intermediate soil cover and diligent moisture regulation across the filled area will be ensured to suppress the anaerobic microbial activity necessary for methane production.
- **Fire Safety:** Continued strict enforcement of no-open-burning and rigorous fire-safety protocols will be maintained across the entire landfill perimeter.



Action Plan Report for Controlling Methane Gas Emissions from Ahmedabad Landfill Site



4. Methane Utilization and Safe Disposal

- Feasibility for Energy Conversion: A detailed feasibility assessment will be commissioned to explore the optimal utilization pathway for the extracted landfill gas, primarily focusing on options like bio-methanation or direct energy conversion.
- Environmentally Sound Disposal: Should the utilization pathways prove to be technically or economically non-viable, the AMC will adopt the method of enclosed flaring of the captured methane to ensure safe disposal and maximize the reduction of its greenhouse gas impact.
- Furthermore, AMC has planned to install 500 TPD BioCNG and 500 TPD BioMethanation plant along with 100 TPD BioCNG plant. By the way of processing MSW, generated gas will be utilized instead of flaring.

5. Continuous Review and Reporting

- Consolidated Reporting: All methane monitoring data and operational outcomes will be formally consolidated into monthly environmental monitoring reports for internal review and public transparency.
- Expert Oversight: Regular technical review sessions will be conducted with subject matter experts and regulatory authorities to ensure continuous progress and adherence to the latest methane mitigation standards.

Conclusion

Ahmedabad Municipal Corporation's comprehensive action plan demonstrates a strong commitment to controlling methane emissions from its landfill site. Through source segregation, advanced waste processing, bio-mining, large-scale tree plantation, scientific landfill management, and proactive community engagement, AMC is progressing towards compliance with the Solid Waste Management Rules, 2016 and the broader goals of environmental safety and sustainability. Continuous monitoring, innovation, and community partnership will remain central to AMC's ongoing efforts to minimize landfill methane along with minimization of methane generation from day to day MSW generation by way of utilizing methane and protect the city's environment for future generations.



Director

Solid Waste Management
Ahmedabad Municipal Corporation

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An action plan for controlling methane gas from the landfill site

To minimize methane gas from the dumpsite, improve environmental safety, and align with Solid Waste Management Rules -2016, Surat Municipal Corporation has focused on reducing methane by taking following effective measures in waste management practices.

1. Background :

Surat Municipal Corporation is responsible for collection of waste from entire Surat City. At present, average 3000 TPD of waste is generated from the Surat City.

2. Practice to Mitigation of Methane gas:

i. Waste Reduction and Diversion along with Recovery of Material:-

A. Source Segregation: Surat Municipal Corporation has implemented a system for segregation of waste from the source. This is being done through the agencies appointed for the door to door garbage collection, Public education campaigns and the provision of designated bins for organic waste. For IEC, necessary experts/ consultants prepare a holistic IEC (Information Education & Communication) & BCC (Behavioral Change Communications) plan for ensuring Segregation at source. Besides Promotion through pamphlets, Newspapers, magazines, IEC activities & other related programs like street play, awareness program, competitions, ward wise/ society wise award program etc. are undertaken in respective zone for changing the household segregation behavior and help SMC in promoting Segregation of waste at source.

B. Maximum Recovery of Material: Waste collected through primary collection reach to relevant transfer station where Mechanized Material Recovery Facilities (MRF) has been developed at the augmented 8 Nos. of Refuse Transfer Station which has ensured reduction of waste quantum (average 190 ton per day). Total installed Capacity of operational 08 Material Recovery Facility is 260 M.T./day.

C. Food Waste Reduction & Onsite Composting: To ensure onsite processing of Organic fraction of waste and reduce secondary transportation cost of organic waste, Surat Municipal Corporation has implemented a system & promoted composting of organic waste at home. This reduces the amount of organic waste going to landfills and provides valuable nutrients for soil. SMC has also formulated policy regarding installation of decentralized OWC plant at Society Level. Surat Municipal Corporation has facilitated service of Mobile Organic waste Recyclers in Surat for bulk waste generator such as community hall, marriage hall, party plot, Hotel and Restaurant.

Moreover, there are 81 RWAs (Resident Welfare Association) in the city self-operating their wet waste by the Organic Waste Converter (OWC). At present decentralized Organic waste converter machines installed at various location of Surat City is of total 20 TPD capacity. To treat the organic waste generated from APMC market in Centralized model and subsequently reduce the transportation cost along with generating revenue in the form of energy, Biogas plant of 50MT/day capacity has been established in APMC market premises since June 2017. As a part of PPP with APMC, SMC ensure supply of Wet waste to APMC Bio-methanation Plant. The USP of the project is the use of low cost waste

streams such as vegetables waste/ food waste/ cow dung as feedstock to generate high value industrial gases and organic fertilizers.

Surat Municipal Corporation has also awarded work of establishment of 90 TPD and 100 TPD capacity Organic waste processing work to two different agencies. 90 TPD Compressed Biogas plant is established at Bamroli and shall be operational by July 2025. The other 100 TPD composting plant shall be operational by December 2025.

D. Processing of Garden Waste: SMC currently has 02 Vermicomposting plants located in the Central and North Zones with a cumulative capacity of 05 TPD. Meanwhile, Surat Municipal Corporation is also in the process of establishing separated Garden waste processing facility of 50 M.T./day capacity.

ii. Dedicated Waste Processing Facilities:-

Surat Municipal Corporation has total 3318M.T. per day capacity of installed plants for processing of different types of waste received from the Surat City. Details are mentioned in the following table

Existing Waste Processing Facilities in Surat City			
Sr.No.	Type of waste processed	Capacity	Remarks
1	Wet waste	1500 M.T./day	This centralized Waste processing facility at Khajod is operational since Jan 2023. Compost & RDF are final products obtained from this plant.
	Dry waste(RDF)	1000 M.T./day	
2	Bio-methanation	50 M.T./day	Plant operational at APMC Market.
3	Material Recovery Facility	260 M.T./day	Operational at 08 RTS.
2	Biomedical waste	07 M.T./day	Incineration facility
3	C&D waste	300 M.T./day	By-products like Soil, paver blocks etc. are recovered.
4	E-waste	01 M.T./day	Primary Collection facility and Material is transferred to Rajkot facility
5	Plastic Waste	200 M.T./day	Pellets are formed from plastic waste.

iii. Complete remediation of Legacy waste :-

Approx. 25,19,450 MT of Solid Waste was spread in an open space of about 6,12,000 sq.m. Frequent burning of crude dumping was creating awful odor and air pollution. This open dumping ground was contributing to various environmental problems in the field of Air Pollution, Climate Change, Soil and Water Degradation etc. In absence of potential of Biomining and bioremediation of the old dumpsite, as mentioned in SWM Rules 2016, capping of the open dumpsite at Khajod was adopted. SMC has awarded the work of scientific closure of waste accumulated at Khajod disposal site at the cost of Rs. 52.80 Cr. under Swachh Bharat Mission. Closure work has been carried out in approx. 38 hector land area and 23 hector Land area is recovered. Work was completed on Dec.-2019.

Beside capping of legacy waste, Biomining of waste dumped in SLF 02 has been undertaken and capping of the SLF has been completed in April 2024. Biomining of total 32 lac M.T. of waste has been completed in the said work.

iv. Efficient Landfill Design and Operation:-

At current active SLF 01 is being used for disposal of only processing rejects (Inert) from the centralised processing facility. The Sanitary Landfill Cell is engineered with liner and drainage system for leachate collection into leachate well. Beside this, daily cover of waste is ensured to minimize methane production.

Moreover, at Secondary Refuse Transfer Station (RTS) situated in all zones, waste is properly compacted before reaching to the processing site or disposal site to reduce the amount of airspace and methane generation.

v. Shifting of Waste processing activities to other site. :-

As the capacity of the existing Landfill site at Khajod is to be exhausted and the new land for the future waste generation is awarded by the government, Surat Municipal Corporation has planned the Development Of Dry Waste & Wet Waste Processing Plant Along With Necessary Infrastructure And Its Operation & Maintenance For 10 Years As Whole At Block No. 197 & 199 At Umber, Surat As Per Swm Rules – 2016. The capacity of the said plant shall be 3500 M.T./day.

The said plant shall incorporate state of the art processing facilities like Mechanized Aeration in Windrows Composting for converting Wet waste into Compost, EOT type Windrows turner to minimize the degradation time of wet waste into compost, Automated BOT segregation system such Optical Machine-Based Sorting, Ballistic Separator with Air density Separators for Maximum material recovery, High durability shredders and Bailing and Wrapping system for seamless production of RDF. The incorporation of ample green cover within and around the facility promotes environmental sustainability and biodiversity conservation.

vi. Community Outreach and Education:-

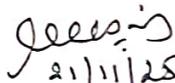
Surat Municipal Corporation conducts public awareness campaigns periodically to educate residents about the importance of reducing waste, separating organic waste, and proper landfill management.

In consultation with various stakeholders, agencies and NGOs, educational programs for schools and community organizations are also undertaken to teach about waste reduction, composting, and landfill methane.

vii. Proposed Measures for Methane Detection, Prevention, Collection, Utilization and Safe Disposal

To strengthen methane management at the landfill and ensure greater environmental safety, Surat Municipal Corporation proposes to undertake the following measures in the immediate future:

1. **Methane Monitoring and Detection:**
 - Expansion of routine Ambient Air Quality Monitoring to include methane (CH_4) as a key parameter.
 - Periodic mobile methane surveys using portable analysers to identify seasonal variations and potential hotspots.
2. **Methane Leak Prevention:**
 - Strict adherence to controlled tipping and waste compaction to avoid gas pocket formation.
 - Ensuring daily/intermediate soil cover and moisture regulation to limit anaerobic microbial activity responsible for methane production.
 - Continued enforcement of no-open-burning and fire-safety protocols across the landfill area.
3. **Enhancement of Existing Gas Vent System:**
 - Gas vents already installed in the landfill will be evaluated for efficiency, and shall be checked periodically for any leakages.
 - Strengthening of barricading, marking and protective measures around gas vent points to eliminate accidental interference.
4. **Utilization / Safe Disposal of Captured Methane:**
 - Feasibility assessment for utilisation of extracted landfill gas through bio-methanation or energy conversion will be initiated.
 - In case utilisation is not technically or economically viable, enclosed flaring of methane will be adopted to ensure safe disposal and reduction of greenhouse gas impact.
5. **Review and Reporting:**
 - Consolidation of methane monitoring outcomes into monthly landfill environmental monitoring reports.
 - Periodic technical review of methane mitigation progress with support from subject experts and regulatory authorities.


21/11/25
I/C City Engineer
Surat Municipal Corporation