

MUNICIPAL CORPORATION OF GREATER MUMBAI
CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPTT.

Dy. Ch. B./ 739 /SWM/Project Date 20-08-2020

Office of the Chief Engineer (SWM)
Municipal Khatav Market building,
3rd floor; Khatav Wadi
Sleater Road, Grant Road (W),
Mumbai-400007

To,
Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WZ),
E-5, Kendriya Paryavaran Bhawan,
E-5 Arera Colony, Link Road-3,
Ravishankar Nagar,
Bhopal – 462 016

- Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2020 in respect of the stipulated prior Environment Clearance terms and conditions in the revised Environment Clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.
- Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2dtd 05.12.2014.

This has reference to the conditions of revised environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD -7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2020 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours faithfully,


Chief Engineer)
Solid Waste Management

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)

Environmental Statement for the financial year ending with 31stMarch2020

PART-A

- i. Name and address of the owner/
occupier of the industry operation
or process. **Municipal Corporation of Greater Mumbai**
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near Kannamwar Nagar,
Kanjur (E), Mumbai - 400042.
- Operator- M/s. Antony Lara Enviro Solutions Pvt. Ltd.
- ii. Industry category: Primary- (STC Code) Secondary- (STC Code) -NA
- iii. Production category – Processing of Municipal Solid Waste
Total capacity up to 7,500 Ton /Day
(Upto 6,500Ton/day by Bioreactor landfill technique
& up to 1,000Ton /day by Windrow Composting.)
- iv. Year of establishment - **2009**
- v. Date of the last environmental
statement submitted. - **Year 2018-2019.**

PART –B

Water and River Material Consumption

i. Water consumption in M³/day

Process: 15.0 m³/day

Cooling: NIL

Domestic: 70.00 m³/day

i) Name of Products	Process Water Consumption Per Unit of Products	
	During the Financial Year April 2018- March 2019	During the Current Financial Year April 2019- March 2020
2. City Compost	0.5m ³ /Ton	0.4m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Financial Year April 2018 -March2019	During the Current Financial Year April 2019- March2020
Municipal Solid Waste (un-segregated)	City Compost	46.35 Ton/Ton of city compost (generated during period 1.04.2018 – 01.01.2019)	50.15Ton/Ton of city compost

* Industry may use codes if disclosing details of raw material would violate contractual Obligations otherwise all industries have to name the raw materials used.

PART-C

Pollutants Discharged to environment/unit of output
(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per MoEF & NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

(as specified under Hazardous Wastes (Management & Handling Rules, 1989).

Hazardous Wastes	Total Quantity (Kg)	
	During the Previous Financial Year April 2018-March 2019	During the Current Financial Year April 2019-March 2020
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Ton)	
		During the previous financial year April 2018-March 2019	During the current financial year April 2019-March 2020
a. From process		NIL	NIL
b. From Pollution Control Facility (Sludge from LTP)		110 Ton	98 Ton
c.(1)Quantity recycled or re-utilized within the unit.		110 Ton	98 Ton
(2)Sold	Plastics Bags	2195.99 Ton	2243.87Ton
	Non- ferrous - Glass	86.93 Ton	317.15Ton
	RDF	108.72 Ton	189.41Ton
	Others		
	Coconut shell	201.72 Ton	840.50Ton
	Paper scrape	7.59 Ton	14.98Ton
	Chappals	59.39 Ton	83.80Ton
	Sponge	18.43 Ton	18.06Ton
	Thermocol	0.20 Ton	0.62Ton
	Tyres	1.97 Ton	13.40Ton
	Wood chips	27.55 Ton	-
Cloths	-	3.94 Ton	
Cotton	-	8.13 Ton	
Plastic bottles	-	278.47 Ton	
	(Total =316.85 Ton)	(Total =1261.90 Ton)	
	Metal	133.30 Ton	202.90Ton
(3) Disposed Land filled material*		NIL	NIL

*ISWM Facility at Kanjur is processing MSW received from Municipal Corporation of Greater Mumbai and only processing of the received Municipal Solid Waste is done.

PART – F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

Metal, Plastic, Glass, RDF, Coconut shell, Paper scrape, Chappal, Sponge, Thermocol, Tires, Wood Chips etc. are recycled through vendors.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant.

Characteristics of solid waste:

Sr. No	Particulars	Percentage
1.	Compostable material	34.15%
2.	Total Re-cyclable- (Plastics, paper, Thermocol, rubber, leather, glass, metals)	1.63%
3.	RDF	64.22%
4.	Total Rejects	00.0%

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 3374Ton/Year Methane i.e.84345 equivalent CO₂Ton /year is controlled. Also, part of landfill gas is converted into electricity which is used as captive power thus natural conventional fuels are saved and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying during unloading and spreading MSW at landfill site before compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Biodegradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside Bio- reactor Land Fill (BLF) material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site. This will help in conservation/ protection of surface water and ground water in surrounding areas. Also use of technology for avoiding denitrification process by using special bio-culture.

During the year new 600 plants were planted and the regular maintenance of about 7,174 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

Impact of abatement measures on cost is as shown below:

Particular	Total Rs. in Lakh
R.O. Plant for drinking water	05.00
Bio-enzyme	36.06
Misting	11.14
LTP	45.47
Captive Power generation	103.00
Expenditure on environmental monitoring & analysis for ensuring compliance	34.22
Dust suppression	9.20
Plantation	10.00
Website Maintenance for information to Public	1.50
Total Rs.	255.59

PART – H

Additional measures/investment proposal for environmental protection including abatement of pollution.

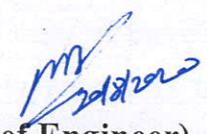
Sr. No.	Particulars	Projected Cost in lakhs
1	Plantation	10.00
2	Rainwater harvesting	80.00
3	Modification of treatment process	20.00

PART –I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.


(Chief Engineer)
Solid Waste Management,

MUNICIPAL CORPORATION OF GREATER MUMBAI
CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPTT.

Dy. Ch. B./ 739 ISWM/Project Date -20-08-2020

Office of the Chief Engineer (SWM)
Municipal Khatav Market building,
3rd floor, Khatav Wadi
Sleater Road, Grant Road (W),
Mumbai-400007

To,
Scientist & Incharge,
Central Pollution Control Board,
Parivesh Bhavan,
Opposite VMC ward office No.10,
Shubanpura,
Vadodra- 390 023


- Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2020 in respect of the stipulated prior Environment Clearance terms and conditions in the revised Environment Clearance (E.C) accorded for the modernization of MSW processing and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.
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- iv. Year of establishment - **2009**
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PART -B

Water and River Material Consumption

i. Water consumption in M³/day

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Cooling: NIL
Domestic: 70.00 m³/day

i) Name of Products	Process Water Consumption Per Unit of Products	
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(as specified under Hazardous Wastes (Management & Handling Rules, 1989).

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PART – E

Solid Waste

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PART – F

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Total Rs.	255.59

PART – H

Additional measures/investment proposal for environmental protection including abatement of pollution.


Sr. No.	Particulars	Projected Cost in lakhs
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PART – I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

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(Chief Engineer)
Solid Waste Management

MUNICIPAL CORPORATION OF GREATER MUMBAI

CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPTT.

CO. B./739

/SWM/Project Date

20-08-2020

Office of the Chief Engineer (SWM)
Municipal Khataw Market building,
3rd floor, Khataw Wadi
Sleater Road, Grant Road (W),
Mumbai-400007

To,
The Member Secretary,
S.E.I.A.A.
Environment Department,
Government of Maharashtra,
15th floor, New Adm. Building,
Mantralaya,
Mumbai – 400 032.

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PART – E

Solid Waste

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CHIEF ENGINEER (SOLID WASTE MANAGEMENT) DEPTT.

Dy. Ch. B./ 739 /SWM/Project Date -20-08-2020

Office of the Chief Engineer (SWM)
Municipal Khatav Market building,
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Mumbai-400007

To,
The Member Secretary,
Maharashtra Pollution Control Board,
Kalpataru Point, 2nd, 3rd, & 4th floor,
Opp. Cine Planet,
Near Sion Circle,
Sion (East),
Mumbai- 400 022.

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Ref: Revised Environmental Clearance issued by State Level Environmental Impact Assessment Authority (SEIAA) vide no. SEAC-2014/CR-162/TC2 dtd 05.12.2014.

This has reference to the conditions of revised environmental clearance issued for proposed modernization of MSW processing and disposal facility of capacity 4000 TPD -7500 TPD at Kanjur, Mumbai.

In this context, the MCGM is hereby submitting the hard copy of Environmental Statement Form V for the financial year ending with 31st March 2020 in respect of the stipulated prior environment clearance terms and conditions in the revised environment clearance (E.C) accorded for the modernization of MSW and disposal facility of capacity 4000 TPD- 7500 TPD at Kanjur, Mumbai.

Submitted please.

Yours faithfully,

M
20/8/2020

Chief Engineer)
Solid Waste Management

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)

Environmental Statement for the financial year ending with 31st March 2020

PART-A

i. Name and address of the owner/
occupier of the industry operation
or process.

Municipal Corporation of Greater Mumbai
Integrated Solid Waste Management Site,
Off Eastern Express Highway, Near Kannamwar Nagar,
Kanjur (E), Mumbai - 400042.

Operator- M/s. Antony Lara Enviro Solutions Pvt. Ltd.

ii. Industry category:

Primary- (STC Code) Secondary- (STC Code) -NA

iii. Production category –

Processing of Municipal Solid Waste
Total capacity up to 7,500 Ton /Day
(Upto 6,500Ton/day by Bioreactor landfill technique
& up to 1,000Ton /day by Windrow Composting.)

iv. Year of establishment -

2009

v. Date of the last environmental
statement submitted. -

Year 2018-2019.

PART –B

Water and River Material Consumption

i. Water consumption in M³/day

Process: 15.0 m³/day

Cooling: NIL

Domestic: 70.00 m³/day

i) Name of Products	Process Water Consumption Per Unit of Products	
	During the Financial Year April 2018- March 2019	During the Current Financial Year April 2019- March 2020
2. City Compost	0.5m ³ /Ton	0.4m ³ /Ton

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Financial Year April 2018 -March2019	During the Current Financial Year April 2019- March2020
Municipal Solid Waste (un-segregated)	City Compost	46.35 Ton/Ton of city compost (generated during period 1.04.2018 – 01.01.2019)	50.15Ton/Ton of city compost

* Industry may use codes if disclosing details of raw material would violate contractual Obligations otherwise all industries have to name the raw materials used.

PART-C

Pollutants Discharged to environment/unit of output
(Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants Discharged (mass/day)	Concentration of Pollutants Discharged mass/volume	Percentage of Variation from Prescribed Standards with Reasons.
(a) Water	Nil	Nil	Nil
(b) Air	Nil	Nil	Nil

As per MoEF & NABL accredited Laboratory reports, all the parameters analyzed are within prescribed limits.

PART-D

HAZARDOUS WASTES

(as specified under Hazardous Wastes (Management & Handling Rules, 1989).

Hazardous Wastes.	Total Quantity (Kg)	
	During the Previous Financial Year April 2018-March 2019	During the Current Financial Year April 2019-March 2020
1. From Process	NIL	NIL
2. From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

		Total Quantity (Kg/Ton)	
		During the previous financial year April 2018-March 2019	During the current financial year April 2019-March 2020
a. From process		NIL	NIL
b. From Pollution Control Facility (Sludge from LTP)		110 Ton	98 Ton
c.(1) Quantity recycled or re-utilized within the unit.		110 Ton	98 Ton
(2)Sold	Plastics Bags	2195.99 Ton	2243.87Ton
	Non- ferrous - Glass	86.93 Ton	317.15Ton
	RDF	108.72 Ton	189.41Ton
	Others		
	Coconut shell	201.72 Ton	840.50Ton
	Paper scrape	7.59 Ton	14.98Ton
	Chappals	59.39 Ton	83.80Ton
	Sponge	18.43 Ton	18.06Ton
	Thermocol	0.20 Ton	0.62Ton
	Tyres	1.97 Ton	13.40Ton
	Wood chips	27.55 Ton	-
Cloths	-	3.94 Ton	
Cotton	-	8.13 Ton	
Plastic bottles	-	278.47 Ton	
	(Total =316.85 Ton)	(Total =1261.90 Ton)	
	Metal	133.30 Ton	202.90Ton
(3) Disposed Land filled material*		NIL	NIL

*ISWM Facility at Kanjur is processing MSW received from Municipal Corporation of Greater Mumbai and only processing of the received Municipal Solid Waste is done.

PART – F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

Hazardous waste is not generated or received at this Integrated Solid Waste Management Site at Kanjur, Mumbai.

Metal, Plastic, Glass, RDF, Coconut shell, Paper scrape, Chappal, Sponge, Thermocol, Tires, Wood Chips etc. are recycled through vendors.

The Municipal Solid waste is received for its processing in Bio-reactor Landfill and compost Plant.

Characteristics of solid waste:

Sr. No	Particulars	Percentage
1.	Compostable material	34.15%
2.	Total Re-cyclable- (Plastics, paper, Thermocol, rubber, leather, glass, metals)	1.63%
3.	RDF	64.22%
4.	Total Rejects	00.0%

PART-G

Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production.

Conservation of natural resources-

Due to the scientific design of bioreactor landfill with the arrangement of impervious lining at the bottom along with leachate collection arrangement has protected the ground water from contamination.

Due to Scientific land filling, the emission of greenhouse gases admeasuring 3374Ton/Year Methane i.e.84345 equivalent CO₂Ton /year is controlled. Also, part of landfill gas is converted into electricity which is used as captive power thus natural conventional fuels are saved and due to controlled flaring of land fill gas smell nuisance is minimized, thus adverse impact on air quality is minimized.

The use of culture-based bio-enzyme for spraying during unloading and spreading MSW at landfill site before compacting and blanketing with soil cover, the generation of smell nuisance is controlled and enhances the Biodegradation.

The arrangement of Mist spraying, around MSW unloading area, leachate treatment plant by using diluted Piiian solution helps in minimizing odor nuisance from VOC/Mercaptans/H₂S etc.

Spreading of soil cover blanket on inactive area of MSW helps in controlling odor and enhances biological activity due to the controlled temperature inside MSW scientific landfill.

Leachate generated in Bio-composting is recycled and sprayed scientifically inside Bio- reactor Land Fill (BLF) material for effective, speedy bio-composting and increase in methane gas production.

The segregation into Recyclables, RDF and composting of Organic rich MSW at the compost plant helps improving economy of the project and the composted material obtained is used by vendors in soil improvement, thus natural resources are conserved.

The leachate is collected in 2 Nos. of impervious ponds. Leachate Treatment Plant installed on ISWM Project Site. This will help in conservation/ protection of surface water and ground water in surrounding areas. Also use of technology for avoiding denitrification process by using special bio-culture.

During the year new 600 plants were planted and the regular maintenance of about 7,174 numbers of peripheral plants along the boundary wall of the project in two rows has helped in arresting the smell spreading during the winter season.

Impact of abatement measures on cost is as shown below:

Particular	Total Rs. in Lakh
R.O. Plant for drinking water	05.00
Bio-enzyme	36.06
Misting	11.14
LTP	45.47
Captive Power generation	103.00
Expenditure on environmental monitoring & analysis for ensuring compliance	34.22
Dust suppression	9.20
Plantation	10.00
Website Maintenance for information to Public	1.50
Total Rs.	255.59

PART – H

Additional measures/investment proposal for environmental protection including abatement of pollution.

Sr. No.	Particulars	Projected Cost in lakhs
1	Plantation	10.00
2	Rainwater harvesting	80.00
3	Modification of treatment process	20.00

PART –I

MISCELLANEOUS:

Any other particulars in respect of environmental protection and abatement of pollution.

Recycle of carbon from stabilized composted solid waste into soil will help in improving quality of soil.



(Chief Engineer)
Solid Waste Management