

BRIHANMUMBAI MUNICIPAL CORPORATION

Chief Engineer (Solid Waste Management) Project

No.Ch.Eng./2351 / SWM/Project dtd. 23.08.2022

Office of the
Chief Engineer (SWM) Project
2nd, 3rd & 4th floor,
Bai Padmabai Thakkar Marg,
Kotwadi, Mahim (Shivaji Park),
Mumbai-400016.
Tel. No.: 022-24320665

To,
Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forest and Climate Change,
Regional Office (WZ),
Ground Floor, East wing, New secretariat building,
Civil line,
Nagpur – 440001

Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2022 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/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 2022 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 (SWM-Project)

ANNEXURE

**ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)**

Environmental Statement for the financial year ending with 31st March 2022

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 Capacity–
Municipal Solid Waste processing 7500 MTD
Bio reactor Plant -6500 MTD
Windrows Composting Plant-1000 MTD
- iv. Year of establishment - **2009**
- v. Date of the last environmental
statement submitted. - **25-06-2021 for the year 2020-2021.**

PART -B

Water and River Material Consumption

I. Water consumption in M³/day

Process: 33.24 m³/Day

Cooling: NIL

Domestic: 70.00 m³/Day 66.76 m³/Day

i) Name of Products	Process Water Consumption Per Unit of Products	
	During the Financial Year April 2020- March 2021	During the Current Financial Year April 2021- March 2022
1. City Compost	0.86 m ³ /Ton	0.86 m ³ /Ton

1 Substituted by Rule 2 (b) of the Environment (Protection) Amendment Rules, 1993 notified vide G.S.R 3'6 (E) dated 22.04.1993.

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Financial Year April 2020 -March2021	During the Current Financial Year April 2021-March2022
Municipal Solid Waste (un-segregated) Fresh	City Compost	38.39 Ton/Ton of city	37.40Ton/Ton of city compost
Bio-mined Material from BLF-Cells	City Compost	24.00 Tons/Ton of City Compost	10.00 Tons/Ton of City Compost
Municipal Solid Waste (un-segregated)	Landfill gases	0.99 Ton /M ³ of gas generated.	1.25Ton/M ³ of gas generated.
Municipal Solid Waste (un-segregated)	Electricity	5.21 Ton/unit of electricity	5.3Ton /unit of electricity.

* 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 2020-March 2021	During the Current Financial Year April 2021-March 2022
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 2020-March 2021	During the current financial year April 2021-March 2022
a. From process		NIL	Nil
b. From Pollution Control Facility (Sludge from LTP)		40.60 Ton	45.00 Ton
c.(1) Quantity recycled or re-utilized within the unit.		40.60Ton	45.00 Ton
(2) Sold	Plastic Bags	1984.25 Ton	934.60 Ton
	Pet-bottles	156.15Ton	147.80Ton
	Non-ferrous -Glass	365.24 Ton	153.18 Ton
	Metal	173.07 Ton	91.64 Ton
	Others	142.63 Ton	126.40 Ton
	RDF	2856.68 Ton	8280.36 Ton
(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 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.

Inerts generated after Bio-mining are used in BLF Cells as cover Sludge generated is diverted to BLF cells for enrichment of Microbes.

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 2623 Ton/Year Methane i.e., 65581 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.

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 Piian 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 Bio-reactor Land Fill Cell.

Leachate generated in Bio-composting is recycled and sprayed scientifically in Bio-reactor Land Fill Cell 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, Kanjur is fully working. This helps 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 has reduced the chemical consumption like lime and alum.

During the year new 501 numbers of plants were planted and the regular maintenance of about 8,251 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:

Sr. No.	Particular	Total Rs. in Lakh
1	Bio-enzyme	37.98
2	Misting	90.76
3	LTP	90.65
4	Captive Power generation	106.44
5	Expenditure on environmental monitoring & analysis for checking compliance	27.56
6	Dust suppression	12.00
7	Plantation	6.00
8	Website Maintenance for information to Public	1.50
	Total Rs.	372.89

PART – H

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

Sr. No.	Particular	Total Rs. in Lakh
1	Plantation	05.00
2	Modification of treatment process.	50.00

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.


23/8/22
Ch. Eng.(SWM –Project)

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Tel. No.: 022-24320665

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.

Sub: Submission of Environmental Statement Form V for the financial year ending with 31st March 2022 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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PART – E

Solid Waste

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a. From process		NIL	Nil
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c.(1) Quantity recycled or re-utilized within the unit.		40.60Ton	45.00 Ton
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To,
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Mumbai – 400 032.

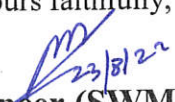
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Solid Waste

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Opposite VMC ward office No.10,
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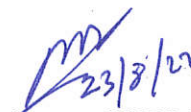
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ANNEXURE

**ENVIRONMENTAL STATEMENT FORM-V
(See rule 14)**

Environmental Statement for the financial year ending with 31st March 2022

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 Capacity–
Municipal Solid Waste processing 7500 MTD
Bio reactor Plant -6500 MTD
Windrows Composting Plant-1000 MTD
- iv. Year of establishment - **2009**
- v. Date of the last environmental
statement submitted. - **25-06-2021 for the year 2020-2021.**

PART -B

Water and River Material Consumption

I. Water consumption in M³/day

Process: 33.24 m³/Day

Cooling: NIL

Domestic: 70.00 m³/Day 66.76 m³/Day

i) Name of Products	Process Water Consumption Per Unit of Products	
	During the Financial Year April 2020- March 2021	During the Current Financial Year April 2021- March 2022
1. City Compost	0.86 m ³ /Ton	0.86 m ³ /Ton

1 Substituted by Rule 2 (b) of the Environment (Protection) Amendment Rules, 1993 notified vide G.S.R 3'6 (E) dated 22.04.1993.

ii. Raw material consumption

Name of Raw materials*	Name of Products	Consumption of Raw material per unit of output	
		During the Financial Year April 2020 -March2021	During the Current Financial Year April 2021-March2022
Municipal Solid Waste (un-segregated) Fresh	City Compost	38.39 Ton/Ton of city	37.40Ton/Ton of city compost
Bio-mined Material from BLF-Cells	City Compost	24.00 Tons/Ton of City Compost	10.00 Tons/Ton of City Compost
Municipal Solid Waste (un-segregated)	Landfill gases	0.99 Ton /M ³ of gas generated.	1.25Ton/M ³ of gas generated.
Municipal Solid Waste (un-segregated)	Electricity	5.21 Ton/unit of electricity	5.3Ton /unit of electricity.

* 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 2020-March 2021	During the Current Financial Year April 2021-March 2022
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 2020-March 2021	During the current financial year April 2021-March 2022
a. From process		NIL	Nil
b. From Pollution Control Facility (Sludge from LTP)		40.60 Ton	45.00 Ton
c.(1)Quantity recycled or re-utilized within the unit.		40.60Ton	45.00 Ton
(2) Sold	Plastic Bags	1984.25 Ton	934.60 Ton
	Pet-bottles	156.15Ton	147.80Ton
	Non-ferrous -Glass	365.24 Ton	153.18 Ton
	Metal	173.07 Ton	91.64 Ton
	Others	142.63 Ton	126.40 Ton
	RDF	2856.68 Ton	8280.36 Ton
(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 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.

Inerts generated after Bio-mining are used in BLF Cells as cover Sludge generated is diverted to BLF cells for enrichment of Microbes.

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 2623 Ton/Year Methane i.e., 65581 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.

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 Piian 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 Bio-reactor Land Fill Cell.

Leachate generated in Bio-composting is recycled and sprayed scientifically in Bio-reactor Land Fill Cell 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, Kanjur is fully working. This helps 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 has reduced the chemical consumption like lime and alum.

During the year new 501 numbers of plants were planted and the regular maintenance of about 8,251 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:

Sr. No.	Particular	Total Rs. in Lakh
1	Bio-enzyme	37.98
2	Misting	90.76
3	LTP	90.65
4	Captive Power generation	106.44
5	Expenditure on environmental monitoring & analysis for checking compliance	27.56
6	Dust suppression	12.00
7	Plantation	6.00
8	Website Maintenance for information to Public	1.50
	Total Rs.	372.89

PART – H

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

Sr. No.	Particular	Total Rs. in Lakh
1	Plantation	05.00
2	Modification of treatment process.	50.00

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.


23/8/22
Ch. Eng. (SWM –Project)