

I/68238/2021(2)

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**HARYANA STATE POLLUTION CONTROL BOARD**  
**C-11, SECTOR-6, PANCHKULA**  
**Website - www.hspcb.gov.in E-**  
**Mail:hspcb-solidwaste@gmail.com**  
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To

The Member Secretary,  
Central Pollution Control Board,  
Parivesh Bhawan, East Arjun Nagar,  
Delhi-110032.

**Subject: Submission of Annual Report under Solid Waste Management Rule, 2016 for the year 2020.**

Kindly refer to the subject noted above.

In this connection, I have been directed to enclose herewith the Annual Report under Solid Waste Management Rule, 2016 for the year 2020 for information and further necessary action please.

DA/as above.

**Sr. Env. Engineer (HQ)**  
**For Member Secretary**

Endst. No.HSPCB/

Dated:

A copy of the above is forwarded to the following for information:-

1. Sr. Environmental Engineer (IT) HSPCB. He is requested to upload the Annual Report under Construction and Demolition Rule, 2016 for the year 2020-21 on the website of the Board.
2. Nodal Officer, E- Sanyojan, HSPCB. He is requested to upload the Annual Report under Construction and Demolition Rule, 2016 for the year 2020-21 on the E- Sanyojan Portal of CPCB.

DA/as above

Signed by Satinder Pal  
Date: 30-09-2021 17:24:04  
Reason: Approved

**Form – V**

Format of annual report to be submitted by the state pollution control board or pollution control committee committees to the central pollution control board

**PART A**

1	Name of the State/Union territory	Haryana
2	Name & address of the State Pollution Control	Haryana State Pollution Control Board, C-11, Sector-6, Panchkula, Haryana
3	Number of local bodies responsible for management of solid waste in the State/Union territory under these rules	88
4	No. of authorization application Received	0
5	A Summary Statement on progress made by local body in respect of solid waste management	Annexure-I
6	A Summary Statement on progress made by local bodies in respect of waste collection, segregation, transportation and disposal	Annexure-II
7	A summary statement on progress made by local bodies in respect of implementation of Schedule II	Annexure- III

**Part-B****Towns/cities:-**

- |                                              |    |
|----------------------------------------------|----|
| 1) Total number of towns/cities              | 88 |
| 2) Total number of ULBs                      | 88 |
| 3) Number of class I & class II cities/towns | 29 |

**Authorization status (names/number):-**

- |                                     |   |
|-------------------------------------|---|
| 1) Number of applications received  | 0 |
| 2) Number of authorizations granted | 0 |
| 3) Authorizations under scrutiny    | 0 |

**Solid Waste Generation status:-**

- |                                              |         |
|----------------------------------------------|---------|
| 1) Solid waste generation in the state (TPD) | 5352.12 |
| 2) Collected (TPD)                           | 5291.41 |
| 3) Treated (TPD)                             | 3123.9  |
| 4) Land filled/Dumped (TPD)                  | 2167.51 |

**Compliance to Schedule I of SW Rules (Number/names of towns/city):-**

- |                                   |               |
|-----------------------------------|---------------|
| 1) Good practices in cities/towns | YES (Overall) |
| 2) House-to-house collection      | 95. %         |
| 3) Segregation                    | 72. %         |
| 4) Storage                        | YES (Partial) |
| 5) Covered transportation         | 84            |

**Processing of SW (Number/names of towns/capacity)**

Solid waste processing facilities setup (MC Wise)

Sr. no.	Composting	Vermi composting	Bio gas	RDF / Pelletization
1	3 Plants in 3 MCs 2500 Composting pits in 76 MCs.	10	03	3 Plant waste to compost + RDF in 3 MCs.

**Processing facility operational**

Sr. no.	Composting	Vermi composting	Bio gas	RDF / Pelletization
1	3 Plants in 3 MCs 2500 Composting pits in 76 MCs.	10	03	3 Plant waste to compost + RDF in 3 MCs.

**Processing facility under installation / planned**

Sr. no.	Composting	Vermi composting	Bio gas	RDF / Pelletization
1	<p>Total 13 Integrated Solid Waste Management clusters have been formed in Haryana. Out of 13 clusters, 2 waste to energy clusters namely Sonapat-Panipat &amp; Gurugram -Faridabad WTE are under implementation. Sonapat-Panipat (700 TPD) waste to energy plant is likely to be commissioned August, 2021. Gurugram-Faridabad plant could not be started due to land constrains. Now, EC has been obtained for Gurugram-Faridabad cluster and land is being reclaimed for setting up of plant. The work of construction of plant is likely to be started by end of 2021 and it will take approximate 18 months for completion.</p> <p>Remaining 11 clusters are based on open technology and the selected agency to decide the technology.</p>			

**Waste to energy plants (Number / names of towns / capacity)**

Sr. no.	Plant location	Status of operation	Power generation (MW)	Remarks
1	Sonapat	Operational	7	Likely to be commissioned in August, 2021
2	Gurugram (Bhandwari)	Under implementation	23	The work of construction of plant is yet to started.

**Disposal of Solid Waste (number/names of towns/ capacity):-**

- |                                |                            |
|--------------------------------|----------------------------|
| 1) Landfill sites identified   | 6 Existing and 12 proposed |
| 2) Landfill constructed        | 6                          |
| 3) Landfill under construction | Nil                        |
| 4) Landfill in operation       | 2                          |
| 5) Landfill exhausted          | 4                          |
| 6) Land filled capped          | Nil                        |

**Solid Waste Dumpsites (number/names of towns/capacity):-**

- |                                             |                                                    |
|---------------------------------------------|----------------------------------------------------|
| 1) Total number of existing dumpsites       | 76                                                 |
| 2) Dumpsites reclaimed/capped               | work of reclamation at 29 Dumpsites is in progress |
| 3) Dumpsites converted to sanitary landfill | Nil                                                |

**Monitoring at Waste processing/Landfills sites:-**

Sr. no.	Name of Facilities	Ambient Air	Ground Water	Leachate Quality	Compost Quality	VOCs
1	Common Municipal Solid Waste	-	Analysis report attached as <b>Annexure IV</b>	-	-	-

	Management Facility (CMSWMF) site at Village Bandhwari, Gurugram					
2	Solid Waste Management Meerut Road, VPO, Seikhpura, Karnal	-	Sample of Water of Tubewell around dumping ground are collected on regular basis. Analysis report attached as <b>Annexure-V</b>		-	-

**Status of Action Plan prepared by Municipalities:-**

Total number of Municipalities 88

Number of Action Plan Submitted Action plan and progress report has already been submitted to CPCB in the matter of OA No 606 of 2018.

## Annexure I

**Sub: Summary statement on progress made by Local Body in respect of Solid Waste Management.**

- 1) As per the annual report submitted by Urban Local Bodies (ULB) department, there are 88 Urban Local Bodies in the State. All these 88 nos. of ULBs have generated about 5352.12 Tonnes per day (TPD) of municipal solid waste, out of which 5291.41 TPD is collected. Out of total collected waste, 3123.9 TPD has been treated and processed and remaining 2167.51 TPD waste has been dumped.

Total 13 Integrated Solid Waste Management clusters have been formed in Haryana. Out of 13 clusters, 2 waste to energy clusters namely Sonapat-Panipat & Gurugram -Faridabad WTE are under implementation. Sonapat-Panipat (700 TPD) waste to energy plant is likely to be commissioned August, 2021. Gurugram-Faridabad plant could not be started due to land constrains. Now, EC has been obtained for Gurugram-Faridabad cluster and land is being reclaimed for setting up of plant. The work of construction of plant if likely to be started by end of 2021 and it will take approximate 18 months for completion. Remaining 11 clusters are based on open technology and the selected agency to decide the technology. The detail of proposed cluster is attached as **Table-1**.

Urban local bodies are doing collection of domestic, trade and institutional food/ biodegradable waste from the doorstep or from the community bin on daily basis. Local bodies are using containerized handcarts/tricycles/ Tractor Trolley / Refuse Compactor or other similar means for the primary collection of waste stored at various sources of waste generation. The solid waste thus collected from households and other sources is transported to Primary Collection Centre (PCC), where, the waste would be primarily segregated i.e. recyclables shall be sorted out by the workers and stored separately. For secondary transportation of solid waste from the Primary Collection Centre (PCC) to the designated processing plant site or sanitary landfill site/ dumping sites, "Dumper Placers with twin bin containers" are provided.

Presently in the State there are (3 plants in 3 MCs 2500 Composting Pits in 76 MCs), (10 nos. Vermi Composting Facilities), (3 nos Bio Gas Plant) and (3 plant waste to compost +RDF in 3 MCs.). Rejects and residues collected from the above mentioned processes are disposed in dumping sites and further proposed to be processed for energy recovery.

<b>Table-1</b>			
<b>Newly Structured Clusters</b>			
<b>Sr. No.</b>	<b>Cluster</b>	<b>Name of ULBs within Cluster</b>	<b>Waste Generation (TPD)</b>
1	Gurugram-Faridabad	Gurugram-Faridabad	2300
2	Sonepat-Panipat	Sonepat-Panipat	700
3	Ambala-Yamunanagar	Ambala, Naraingarh, Yamuna Nagar, Radaur, Barara, Sadhura	675
4	Karnal-Kaithal-Kurukshetra	Indri, Nilokheri Tarori, Karnal Gharaunda, Nissing, Assandh, Thanesar, Shahbad, Ladwa, Kaithal, Kalayat, Rajound, Cheeka, Pundri	590
5	Rohtak-Bahadurgarh-Jhajjar	Kalanaur, Meham, Rohtak, Gohana, Bahadurgarh, Kharkhoda, Julana, Jhajjar, Sampla, Beri	601
6	Hisar-Fatehabad	Hisar, Barwala, Hansi, Siwani, Fatehabad, Bhuna, Uklana Mandi, Ratia, Tohana, Jhaka Mandi	407
7	Panchkula	Panchkula	215
8	Bhiwani	Bhiwani, Bawanikhera, Charkhi Dadri	155
9	Jind	Jind, Narwana, Safidon, Uchana, Narnaund, Sisai, Bass	181
10	Sirsa	Sirsa, Rania, Ellenabad, Kalanwali, Mandi Dabwali	168
11	Rewari	Bawal, Dharuhera, Rewari, Mahendergarh, Kanina	146
12	Punhana	Punhana, F/Jhirka, Hathin, Hodal, Palwal, Sohna, Nuh, Tauru	466
13	Farukhnagar	Farukh Nagar, Haily Mandi, Pataudi	26

**Annexure-II****Sub: Summary Statement on progress made by Local Bodies in respect of waste collection, segregation, transportation and disposal.**

As per the status submitted by ULB department, the detail on progress made by Local Bodies in respect of waste collection, segregation, transportation and disposal is given below:

**A. Waste Collection**

Door to door collection is being done in around 1467 (Approx 95%) out of 1540 wards and existing waste collection vehicles are being modified into two covered compartments for collection of waste in segregated manner. Freshly, ordered vehicles will have two covered compartments for collection of wet and dry waste in a segregated manner. A Separate basket/bin is kept in waste collection vehicle/ tricycle for segregated collection of domestic hazardous waste.

Urban local bodies are doing collection of domestic, trade and institutional food/ biodegradable waste from the doorstep or from the community bin on a daily basis. Large containers kept in the fruit and vegetable markets and removed during night time or non-peak hours by the local body.

**B. Transportation**

Local bodies are using covered containerized handcarts/tricycles/ Tractor Trolley / Refuse Compactor or other similar means for the primary collection of waste stored at various sources of waste generation. Existing waste collection vehicles are being modified into two covered compartments for collection of waste in segregated manner. Freshly, ordered vehicles will have two covered compartments for collection of wet and dry waste in a segregated manner. For secondary transportation of solid waste from the Primary Collection Centre (PCC) to the designated processing plant site or sanitary landfill site, "Dumper Placers with twin bin containers" is provided.

**C. Segregation**

Out of 1540 wards, source segregation has been achieved in 1112 wards (Approx. 72%) till December, 2020 and for coverage in remaining wards rigorous IEC campaign is being organized across the State in all ULBs.

**D. Disposal**

Rejects and residues collected from the above mentioned processes are disposed in dumping sites and further proposed to be processed for energy recovery. Presently, there are (3 plants in 3 MCs 2500 Composting Pits in 76 MCs), (10 nos. Vermi Composting Facilities), (3 nos Bio Gas Plant) and (3 plant waste to compost +RDF in 3 MCs).

**Annexure-III****Sub: Summary statement on progress made by local bodies in respect of implementation of Schedule-II.**

Presently there are (3 plants in 3 MCs 2500 Composting Pits in 76 MCs), (10 nos. Vermi Composting Facilities), (3 nos Bio Gas Plant) and (3 plant waste to compost +RDF in 3 MCs) in the State of Haryana.

The approach adopted by the state is broadly categorized under two heads;

- a. **Decentralized Approach (Town/City Wise)**
- b. **Integrated Centralized Waste Processing Approach (Cluster Wise)**

**Decentralized Approach** is being adopted with an objective to create an atmosphere which impacts the ideology and mind set of people as to how important is their role in ensuring effective and efficient waste management with minimal resources and which is self-driven.

As part of this approach presently around 2500 Compost pits have been constructed across all the ULBs. Also 416 Material Recovery Facilities have been set up and the target is to reach 465 MRFs, within a span of next 3 months with each ULB having at-least 1(One) MRF. Apart from setting up Compost pits, Vermi-Composting facility, Bio-methanation plant, windrow composting at existing dumpsite is being currently practiced. Also, in Karnal city alone approx. 2000 Household composting pits have been recorded.

All the ULBs have also ensured that all the Bulk Waste Generators are identified and have started processing their wet waste, this resulted in overall reduction in volume of wet waste being sent for disposal.

The nos. pertaining to Compost pits, Household composting, Wet Waste Processing through Vermi-Composting, Windrow composting and bio-methanation and dry waste recovery, reuse and recycling through MRFs are continuously increasing and all the efforts are being made to improve the Solid Waste Management Scenario in time bound manners.

**The Integrated Centralized Waste Processing Approach**

As per action plan submitted by ULB department. Government of Haryana has adopted cluster based integrated approach for Solid Waste Management. The Integrated Centralized Waste Processing Approach (Cluster Wise) is being adopted as a long-term approach within an overall objective to setup regional Waste to Energy & Waste to Compost + RDF processing facilities and Secured Sanitary landfills for scientific disposal of Solid Waste. This approach is more coveted considering the constraints posed by the decentralized approach and its sustainability over long run

As part of this approach, total 13 Cluster have been formed covering all the ULBs. Two (2) Clusters are Waste to Energy having average solid waste quantum more than 500 TPD and remaining Eleven (11) are Open technology cluster. Also, under this approach the projects will be set up on PPP mode and single agency/concessionaire will be responsible for Door to Door Collection, transportation, processing and disposal of Solid Waste for a concession period of 22 years.

Currently 2 Waste to Energy Cluster Projects namely Sonapat-Panipat and Gurugram-Faridabad have been awarded and construction of Sonapat-Panipat Cluster (700 TPD) Waste to Energy project is under progress and 75% construction have been finished with proposed tentative commissioning by August, 2021. The

Environmental Clearance of Gurugram-Faridabad (2300 TPD) Waste to Energy Projects has been granted and application has been submitted for obtaining Consent to Establish (CTE) for same. The construction of the plant is likely to be started soon. Once commissioned these two projects alone will cater to approx. 60% processing of entire waste being generated in the state i.e. approx. 5000 TPD. Remaining 11 clusters are based on open technology and the selected agency to decide the technology.

Also, there are two existing operational centralized waste to compost processing facilities in the State i.e. Rohtak (150 TPD) & Karnal (150 TPD). Under this approach these plants will be upgraded and expanded to cater the future waste generation requirements.

The sites have been identified and procured for all the clusters except 2 Clusters and the tendering process is under progress. The Overall targeted schedule for successfully awarding and commissioning rest 11 Clusters is December 2022.

Ground Water Sample Gurugram Region (N)

Sampling Location	Analysis Report No.	Date of Collection	pH	EC us/cm	BOD mg/l	COD mg/l	TDS mg/l	TSS mg/l	TH mg/l	Cl mg/l	SO4 mg/l	PO4 mg/l	F mg/l	Fe mg/l	Ni mg/l	T.Cr mg/l	CN mg/l	Zn mg/l	Ca mg/l	Mg mg/l	Na mg/l
<b>Submersible pump of Sh. Anant Lal</b>																					
<b>Village Bandhwari Gurugram</b>																					
267	19.06.2020	7.1	1810	ND	ND	965	5	125	70	22	0.1	ND	ND	ND	ND	-	ND	25.1	15.9	46.7	
1478	28.12.2020	7	1560	ND	ND	910	4	125	75	28	0.1	ND	ND	ND	ND	ND	ND	42.6	9.2	51.3	
<b>Mandir Village Bandhwari Gurugram</b>																					
267	19.06.2020	7.2	1620	ND	ND	790	3	105	85	18	ND	ND	ND	ND	ND	-	ND	22.3	12.7	54.1	
1478	28.12.2020	7	1680	ND	ND	795	6	115	95	24	ND	ND	ND	ND	ND	ND	ND	39.1	11.4	49	
<b>Sansad Sahid Petrol Pump Faridabad Road, Gurugram</b>																					
267	19.06.2020	7.3	1040	ND	4	530	7	85	65	24	0.1	ND	ND	ND	ND	-	ND	21.6	13.2	51	
1478	28.12.2020	7.2	1140	ND	ND	580	4	80	55	32	ND	ND	ND	ND	ND	ND	ND	25.2	14.6	53.3	
<b>Teen Murti Hanuman Mandir, Gurgaon Faridabad Road Near Toll Plaza Gurugram</b>																					
267	19.06.2020	7	1170	ND	ND	615	5	110	95	22	ND	ND	ND	ND	ND	-	ND	19.8	14.6	63.3	
1478	28.12.2020	7.1	1120	ND	ND	595	6	100	80	18	ND	ND	ND	ND	ND	ND	ND	21.6	12.1	59.9	
<b>Sh. Lala Ram House Near School Village Bandhwari gurugram</b>																					
267	19.06.2020	7.1	1680	ND	4	920	6	130	105	32	0.2	ND	ND	ND	ND	-	ND	27.3	18.9	70.2	
1478	28.12.2020	7	1710	ND	4	945	3	110	125	38	0.1	ND	ND	ND	ND	ND	ND	29.1	19.6	75.1	
<b>Chanderpal House Near School Bandhiwari</b>																					
267	19.06.2020	6.9	1470	ND	4	835	4	150	120	34.2	ND	ND	ND	ND	ND	-	ND	31.1	20.8	80.4	
1478	28.12.2020	7.2	1510	ND	ND	825	6	130	115	42	ND	ND	ND	ND	ND	ND	ND	33.3	18	81.6	

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Annexure-V																											
Lab Name	Analysis Report No.	Date of collection	Appearance	Odor	Temperature	pH	Conductivity	BOD	Nitrate	Total caoliform	COD	Total Dissolved Solids	Total Suspended Solids	Total Hardness	Fluoride (as F) mg/l	Chloride	Sulphate	Sodium	Potassium	Calcium	Magnesium	Nickel	Copper	Zinc	Lead	Iron	
<b>Tubewell at MSW Site, Meeruth Road, Karnal (Samle Code -</b>																											
HSPCB, Panchkula	2218-26.02.2020	10.02.2020	Colourless	Almost Odourless	Not Analysed	7.79	540	BDL(D L-1)	Not Analysed	Not Analysed	BDL(D L-5)	330	BDL(D L-5)	188	Not Analysed	18.0	Not Analysed	122	0.5	44	18.954	Not Analysed					
HSPCB, Panchkula	2294-22.04.2020	11.04.2020	Colourless	No Odour	Not Analysed	8.69	673	BDL(D L-1)	Not Analysed	Not Analysed	BDL(D L-5)	398	BDL(D L-5)	256	Not Analysed	32.0	Not Analysed	122	0.5	70.4	19.44	Not Analysed					
HSPCB, Panchkula	394-29.07.2020	17.07.2020	Colourless	Odourless	Not Analysed	7.09	1094	BDL(D L-1)	0.07	Not Analysed	BDL(D L-5)	588	BDL(D L=5)	146	0.09	10.0	15.63	62	1.3	43.2	9.234	Not Analysed	Not Analysed	Not Analysed	Not Analysed	0.045	
Analysis Report No.	Date of collection	Appearance	Odor	Temperature	pH	TSS	BOD	COD	O &G	Turbidity NTU	Conductivity Micro	Total Dissolved Solid	Fecal Coliform MPN/100ml	Chloride	Fluoride	Dissolved Phosphate	Total chromium	Nickel	Iron	Zinc	Copper	Lead	Nitrate mg/l				
4146-29.10.2020	16.10.2020	Colourless	Odourless	Not Analysed	7.64	BDL (DL=5)	BDL (DL=1)	BDL (DL=5)	BDL (DL=2)	Nil	561	298	N.D.	10	0.7	N.D.	N.D.	N.D.	N.D.	N.D.	0.014	0.158	N.D.	0.09			