

1st INTERIME REPORT

ON

BULK WASTE GENERATORS

SUBMITTED BY

**4 SUB- COMMITTEES CONSTITUED PURSUANT THE
ORDERS OF HON'BLE NGT IN THE MATTER OF
199/2014 & 281/2016**

Interim Report of the Sub-Committee-1 **For New Delhi Municipal Council area**

Consequent to the directions of Hon'ble NGT vide its order dated 10.01.2017 and 11.01.2017 in the original Application No 199 of 2014 in the matter Almitra H. Patel vs Union of India and Application No. 281 of 2016 in the matter of Kudrat Sandhuvs Govt. of NCT of Delhi, the Government of India, Ministry of Environment, Forests and Climate Change (MOEF&CC) constituted 4 Sub-committees on 23.01.2017 to visit various locations in NCT of Delhi where the mass generators of wastes are located and submit report to the Ministry. These sub-committees would be entitled to direct assistance or participation of any of the Public Authorities, Corporations, Local Authority, DDA, or any other Government and semi-Government wherever they require participation of any officer of Governments or Authorities. The Sub-Committee-1 constituted for New Delhi Municipal Council (NDMC) has been given mandate to inspect the following locations in NDMC area:

- all four and five star hotels,
- all hospitals which are more than 200 beds whether private or Government,
- the cooperative group housing society having more than 300 flats, markets,
- shopping malls having built-up area of more than 50,000 sq.mts.,
- college having hostel and accommodating more than 500 students and
- such other places in NDMC area of NCT of Delhi

According to NDMC, there are no colleges with hostel facility with more than 500 students, group housing societies having more than 300 flats and shopping malls having built-up area of more than 50,000 sq.mt. Therefore, Sub-Committee-1 has inspected all four and five star hotels and hospitals in NDMC area during 1st& 2nd week of February, 2017 as per the list provided by NDMC. The outcome of the monitoring of NDMC area by the Sub-committee-1 is delineated hereunder.

1. Visits to Four & Five Star Hotels

A list of 16 hotels (**Annexure A**) located in NDMC area was provided by NDMC and as such all these 16 hotels were inspected by the members of the Sub-Committee-1. The team inspected the various facilities of the hotels such as kitchen, laundry section, waste storage areas, Sewage Treatment Plant (STP), Effluent Treatment Plant (ETP), Rain Water Harvesting (RWH) system and compost plant wherever provided. Six hotels namely, Le-Meridien, Taj Mahal, Shangri-La's Eros, Imperial hotel, Park hotel & Janpath hotel were found complying with effluent standards. Hotel Claridges and Maruya hotel were having slightly above BOD of 32 mg/l and 34 mg/l as against threshold of 30 mg/l and may be treated differently.

The details of the non compliant hotels w.r.t Environmental Standards of treated effluent are as under:

- (i) **Vivanta Hotel:** The STP was provided at the Hotel and found operational. The treated effluent samples from STP were collected for the analysis and Biological Oxygen Demand (BOD) and Total Suspended Solid (TSS) were found as 40 mg/l and 50 mg/l, respectively. This partially treated sewage is being discharged in NDMC sewerage system thus increasing the load on the sewage treatment plant (STP) operated by Delhi Jal Board at Okhla. Treated sewage from STP with high BOD indicated that no proper treatment of sewage was being done in the STP installed and operated by the hotel. There is an urgent need to upgrade STP so as to comply with the Stipulated Standards. It was informed by the representative of the Delhi Pollution Control Committee (DPCC), who is also the members of the Sub-committee-1, that this hotel has got Consent to Operate (CTO) with validity upto 7th July, 2018.
- (ii) **The Royal Plaza Hotel:** The STP was provided at the Hotel and found operational. The treated effluent samples from STP were collected for analysis and BOD and TSS were found as 230 mg/l 480 mg/l, respectively. Such a high BOD and TSS levels indicate that the STP was not effective in treatment of sewage. The STP needs to be upgraded immediately so as to comply with the stipulated standards. Incidentally, the hotel has go the Consent to Operate from DPCC with validity up to 11.07.2018 in the name of Hotel Queen Road Pvt. Ltd., which itself is a violation. The Committee suggested that the hotel management should

take immediate action to obtain the Consent to Operate in the name of The Royal Plaza Hotel from DPCC.

(iii) Ashoka & Samrat Hotel- The committee inspected the Ashoka Hotel and found that their STP is very old. The operation of the STP was not to the desired standard due to foully smell and overflowing of sewage in the plant premises. This was also indicated in the effluent samples analyzed by Central Pollution Control Board (CPCB) where BOD was found 51 mg/l, higher than the prescribed standards. The Hotel Management was suggested to take remedial action at the earliest for retrofitting/ augmentation of the existing STP. There was no provision observed for sludge management at STP premises and the sludge drying bed was full with discarded materials. The sewage/ wastewater was spreading all over the STP units which causes mosquito spreading also.



It is also pertinent to mention here that the sewage from Hotel Samrat was also being brought to same STP established in the premises of Ashoka hotel. The sewage generated from Ashoka and Samrat hotels is treated in common STP. There was also a common laundry of Ashoka hotel and Samrat hotel. The laundry liquid waste also goes to STP for further treatment. It was observed that RO rejects were also found to be pumped into ineffective STP. This partially treated sewage is ultimately discharged into the NDMC sewerage system, thus increasing the load on the STP at Okhla.

Consent to Operate was given to Ashoka Hotel with validity upto 27-09-

2017 and Samrat Hotel with validity upto 11-07-2018by DPCC. In respect of Ashoka hotel, it was found that rain water harvesting system was not maintained properly and found chocked which require immediate cleaning so as to make way for percolation of rain water into the ground water regime.

Additional observations in respect of Hotel Ashoka are as under:

- The Organic Waste Convertor (OWC) was installed in the premises and found not operational. The wet waste was collected and stored at the designated place in the hotel premises. Dry waste was collected by the hotel management and handed over to the outsourced agency for recycling, reuse and further safe disposal.
- Dry and wet waste of kitchen was mixed together for which it was suggested to collect in separate bins and handover to the concerned outsourced agency. The waste disposal process followed by the outsourced agency was not known to the hotel management.
- During the visit to hotel, floor cleaning process was under progress without covering the food to serve and grains in the kitchen which was very unhygienic. Hotel management was suggested to follow the guidelines for cleaning of kitchen floors.

Additional observations in respect of Hotel Samrat are as under:

- The Organic Waste Convertor (OWC) was installed in the premises and functional.
- The wet waste was collected and stored in the designated place within the premises. The dry waste was outsourced to an agency for collection and further recycling and reuse.
- The waste disposal process followed by the outsourced agency is not known to the hotel management.



- RWH system was in place and not working. It was suggested to clean the filter pre and post monsoon.

(iv) Hotel Taj Palace: Domestic wastewater including laundry and kitchen discharge from Hotel was collected together at STP for further treatment. Presently, the sewage/ wastewater was discharged to the nearest sewer lines of NDMC without any treatment. The analysis of influent samples taken at STP indicated the concentration of BOD and TSS as 537 mg/l and 417 mg/l, respectively. DPCC issued Consent to Operate with validity up to 18/03/2019. The STP based on MBBR technology was under renovation. According to Taj Palace Hotel, the augmentation of the STP will be completed within 2 months. There was no proper sludge management facility available in the Hotel.

Additional observations in terms of Hotel Taj Palace are as under:

- The Organic Waste Converter (OWC) was not installed in the premises. The wet waste was collected and stored in the designated place and outsourced to an agency for further processing and disposal.
- It was planned by the hotel management to install bio-methanation plant based on wet waste for production of bio-gas and compost. The plant shall be established by March 2017.
- Dry waste was also collected in the premises and handed over to the outsourced agency for recycling and reuse. The waste disposal process followed by the outsourced Agency concerned is not known to the hotel management.
- RWH system was in place and need to be cleaned. It was suggested to make clean the filter pre and post monsoon.

(v) Hotel Claridges: The observations made by the committee are as under:

- The Organic Waste Converter (OWC) was installed in the premises and not functional since April 2016. Gear box of OWC was not functional due to which convertor was not operational. The wet waste was collected by the hotel management and stored in

the designated place. Wet waste was outsourced to an agency for further processing and scientific disposal.

- The committee suggested to make OWC operational at the earliest as the bulk generator of waste must have waste disposal system in their premises.
- Dry waste was also collected and handed over to the outsourced agency for recycling and reuse. The waste disposal process followed by the outsourced agency concerned is not known to the hotel management.
- The STP was functional. As per CPCB analysis report, BOD in the effluent was found as 32 mg/l, slightly higher than the prescribed standards. It was slightly increased with the prescribed standard of 30mg/l. There was no proper sludge management facility at STP observed during inspection.
- RWH system was in place. Filter media of the RWH system was found not cleaned and suggested to make clean the media pre and post monsoon.

(vi) Hotel The Leela: The observations made by the committee are as under:

- The Organic Waste Converter (OWC) was installed and functional in the premises. The capacity of the OWC plant was 500 kg/day. The wet waste was collected and stored in the designated place within the hotel premises



for producing compost using OWC. The compost produced was utilized in their horticulture.

- Dry waste was also collected by hotel management and handed over to the agency concerned for recycling and reuse. Twin bin system was also placed in the kitchen for collection of dry and wet waste. Flowers generated during the marriage function was outsourced and handed over to another agency for making

colours, etc.

- Domestic sewage including laundry and kitchen discharge from Hotel was collected and treated in STP. There was foul smell at the plant site which needs to be controlled immediately with suitable modification. There was no proper provision for sludge management at STP.
- The STP was functional at the Hotel. As per CPCB report, BOD of 54 mg/l observed in the treated effluent which was higher than the prescribed standard. The Committee suggested that the immediate action should be taken by the hotel management to modify the existing STP to reduce the pollution load on the environment. There was no proper sludge management facility observed at STP.
- RWH system was in place and need to be cleaned pre and post monsoon starts.

(vii) Hotel ITC Maurya: The observations made by the Committee are as under:

- The Bio-methanation plant for conversion of organic waste into bio-gas was installed in the premises and found functional. The wet waste was collected and stored in the designated place in the premises. The plant was maintained in good condition with proper gas collection and compost disposal system. Dry waste was also collected and handed over to the outsourced agency for recycling and reuse. However, the waste disposal system followed by the outsourced Agency is not known to the hotel management.
- Domestic wastewater from Hotel was collected at collection tank of STP for further treatment. The plant was found operational. As per CPCB report, BOD in the effluent was 34 mg/l, slightly higher than the desired standards. The Committee suggested that the care



should be taken to reduce the pollution load in the environment through proper and efficient operation of STP. There was no proper provision for sludge management at STP. The treated wastewater was used for horticulture and in cooling tower also.

- There was a separate plant for treatment of Laundry wastewater in the premises and treated water is re-used in the Laundry itself.
- RWH system was in place and need to be cleaned. It was suggested to make clean the filter before monsoon starts, and after monsoon (Pre and post monsoon).

(viii) Hotel Metropolitan: The observations made by the Committee are as under:

- The Organic Waste Converter (OWC) was installed in the premises and functional. The compost produced by OWC had been used for in-house horticulture purpose. The wet waste was collected and stored in the designated place inside the hotel premises. Dry waste was also collected and handed over to the outsourced agency for recycling and reuse. The dry waste disposal process followed by the outsourced Agency is not known to the hotel management.
- Domestic wastewater including laundry and kitchen discharge from Hotel was collected at operational STP for further treatment. As per CPCB report, BOD and TSS were 51 mg/l and 78 mg/l, respectively in the treated effluent, higher than the prescribed standard. The Committee suggested that additional arrangement be made at STP to reduce the pollution load on the environment and to achieve the desired discharge standard. There was no proper provision for sludge management at STP.
- RWH system was in place in the premises which need to be cleaned frequently. It was suggested to make clean the filter pre and post monsoon.



(ix) Hotel The Lalit: The observations made by the Committee are as under:

- The Organic Waste Converter (OWC) was installed in the premises but not functional. The wet waste was collected and stored in the designated place within the premises. Dry waste was also collected by the hotel management and handed over to the outsourced agency for recycling and reuse. The waste disposal process followed by the outsourced Agency concerned is not known to the hotel management.
- Domestic wastewater and laundry and kitchen discharge from Hotel was collected separately at STP and ETP for further treatment. The STP was operational. As per CPCB report, BOD was 57 mg/l in the treated effluent, higher than the standard prescribed (30mg/l). Similarly, BOD and TSS was 50 mg/l and 42 mg/l, respectively observed at ETP, again higher than the prescribed standards. The Committee suggested that the STP and ETP should be modified immediately to reduce the pollution load on the environment. There was no proper provision for sludge management at STP.
- RWH system was in place and need to be cleaned. It was suggested to make clean the filter pre- monsoon and post- monsoon.

In view of above situation, it is recommended that the show-cause notices be served to the defaulting hotels as to why action be not taken against them for not operating STPs/ETPs properly and discharging non-compliant effluents. Such defaulting hotels are:

Hotel Taj Vivanta Hotel Royal Plaza	Hotel Samrat Hotel Lalit
Hotel Taj Palace	Hotel Metropolitan
Hotel Ashoka	Hotel Leela Palace

The influent/ effluent sample collected from STPs/ETPs of hotels were analyzed and the report is appended.

2. Visit to RML & Lady Harding Medical College & Hospitals

(i) Bio-Medical Waste

The members of the Sub-committee-1 visited RML Hospital on February 10, 2017. The committee members concentrated the visit to the various wards of the hospital with respect to bio-medical waste management. It was observed by the members that color coded waste collection bins were provided in various wards and proper segregation of bio-medical waste mechanism was in place to transport the waste to a waste collection point in the premises. However, the waste collection point was not fitted with air conditioning system to maintain temperature to 4-5°C. It was informed that from this storage facility, provided under the normal temperature in the hospital, the bio-medical waste sent to an approved agency known as M/s Biotic Waste Solution Pvt. Ltd. to their facility located at 46 & 47, SSI Industrial area, GT Karnal Road, New Delhi-110033.

M/s Biotic waste solution processing plant was visited by the Sub-Committee members on February 13, 2017 and observed that the processing facility, there were 2 incinerators having capacity of 250 kg per hour each and one rotary incinerator having capacity 750 kg per hour. These incinerators were found to be working satisfactory and provided with the scrubber, bag house and two stacks of 30 meters height to disperse the flue gases, as pollution control measure. The scrubbed effluent was taken to effluent treatment plant (ETP) for its treatment having capacity of 15 KL/D. The treated effluent from ETP was sent to a common effluent treatment plant (CETP) facility located at Shahdara Manufacturing Association (SMA) area which is operated by DSIIDC.

The infectious bio-medical waste was received in yellow bags and incinerated. The waste in blue bag which contains glass, plastic, etc. was segregated after being autoclaved and thereafter glass and plastic wastes sent to approved vendors located at Firozabad (authorized vendor M/s Goyal Glassware Pvt. Ltd., 11 UPSIDC). Segregated Plastic waste after shredding was sent to authorized vendor M/s Polycraft Engineers Murthal, Polt no 27, Sonapat, Haryana. The sludge generated

from EPT, reported to be 3-3.5 kg per day and coming under the category of hazardous waste, at present was stored within the premises in this waste treatment facility. However, there was need to either send it to Treatment Storage Disposal Facility (TSDF) or make it immobile before sending it to the secured landfill (SLF). For the purpose of making the toxic sludge immobile, there is need to do R&D work through some Research Organizations such as NEERI, NCL, IIT's etc. Standard Operating Procedure (SOP) for Hospitals brought out by the Ministry of Urban Development under Swachh Bharat Mission, may also be referred by the concerned agencies.

Land allotted for TSDF near Bawana is about 14 Acres and will be developed by DSIIIDC by Dec, 2017. There are three SLF facilities in Delhi under MCD Jurisdiction but no consent/authorization issued from DPCC.

It was brought to the notice of the Sub-Committee by DPCC representative that Consent to Operate for Hazardous Waste and Bio-Medical Waste was valid only upto 13/08/2016. However, Consent to Operate had been applied by the RML Hospital on 15/07/2013. But DPCC has not yet given Consent to Operate to the Hospital. Similar situation prevails in Lady Hardinge Medical College and Hospital with respect to Authorization and Consent to Operate. Authorization for consent to operate to Lady Hardinge Medical College and Hospitals for hazardous waste and bio-medical waste was given by DPCC with validity upto 21/05/16. Consent to Operate to the Hospital was given by DPCC with validity upto 18/04/2016. It may, therefore, be noted that both the hospitals are operating without any valid consent and valid authorization.

(ii) Kitchen Waste Handling and Laundry Facilities

It was observed by the visiting team that effluent generated from kitchen and laundry was not treated before being discharged to NDMC sewerage system. Further, it was observed that the vent pipe provided for removing fumes/gases is not having proper height and as such on increasing height of vent pipe is required as per the norms. It may be

raised to around 3 meters. The Committee was informed that the Effluent Treatment Plant (ETP) has been proposed to be setup within the campus of RML Hospital. CPWD has been awarded the contract for executing the same which is likely to be commissioned in about 6 to 8 months.

The washing operations being carried out in the laundry section of Lady Hardinge Medical College and Hospital was not meeting the desired norms in terms of better work practices, house-keeping and disinfection. It was also reported that the washing powder used was basically caustic soda and detergents containing phosphate. It would, therefore, be desirable to use washing chemicals /powder similar to those being used by five star hotels in Delhi which are stated to be phosphate free (claimed organic detergent).

Lady Hardinge Hospital was having ETP (2KLD) which appeared to be quite old but found working. The treated effluent discharged into NDMC sewerage system. The bio-medical waste generated was recorded with proper logbook. It was found that bio-medical waste collected from different wards from hospitals in designated colored bags were brought to a common storage facility near to the ETP. The hospital had made arrangement with approved vendor for collection, transportation and treatment of the bio-medical waste of the hospital. It was observed that the storage room for biomedical waste was under normal temperature and as such there is need to provide an air conditioned room to keep waste before the same is handed over to the approved vendor.

House-keeping in the kitchen of KalawatiSaran Hospital was found far from being satisfactory and even clothes of the cooking staff were found hanging inside the kitchen, which could be a source of infection and reflects unhygienic conditions and bad practices being followed in the kitchen. Chimney was not provided for venting out kitchen gases. There was no proper collection of kitchen waste as well.

There were 11 rainwater harvesting pits provided in KalawatiSaran Hospital, and Lady Hardinge Hospital, which were found not in proper condition as they were not properly cleaned and appear to be choked.

Municipal solid waste generated was collected and brought to a designated place from where NDMC made arrangement for lifting of the bags. The collected bags were finally sent by NDMC to Waste to Energy Plant at Okhla for further processing.

According to Bio-Medical Waste Management Rules, 2016, the hospitals are required to provide auto calving / microwaving facility for treatment of bio-medical waste prior to its handing over to the bio medical waste treatment facility provider. However, it was observed that none of the hospitals (RML and Lady Hardinge) have auto-calving or microwaving facility in their hospitals for the infectious waste before handed over to the bio-medical waste vendor, which poses significant risk to the human beings and to the environment. It is, therefore, desirable that these two hospitals are directed to provide autoclaving / microwaving facility for treatment of the infectious waste as per the requirement of Bio-Medical Waste Management Rules, 2016 before handing-over to approved vendor. Specially, the laboratory culture and outdated blood transfusion bags are coming under the category of infectious bio-medical wastes which required to be autoclaved/micro-waved before being handed over to the approved facility provider.

3. Management of Municipal Solid Waste in NDMC Area

According to NDMC, the population is 2.54 lakhs as per census 2011 and floating population is 13 to 14 lakhs per day. As a thumb rule, Municipal solid waste generation per capita is 0.5 kg per day for population which comes to about 125 metric tonnes per day (MTPD) and waste generation from floating population is about 200 MTPD. Therefore, a total of about 325-350 MTPD municipal solid waste is generated in NDMC area, which includes horticulture waste as well.

There are 1900 community mobile bins of varying capacity i.e. 1100 ltr./4500 ltr. capacity placed in NDMC area which is almost 8 to 10 times the capacity of generation of municipal solid waste in NDMC area. In addition to this, small sized litter bins, 1500 number have been placed in

market area all along the roads. Further, for collection of garbage, 15 compactors (5 big and 10 small), 28 auto tippers, 621 tricycle rickshaws and 14 open Tipper trucks have been provided for carrying MSW to waste to energy plant/compost plant at Okhla. It was stated by NDMC representative that entire MSW generated in NDMC area is collected and transported to Waste to Energy Plant located at Okhla for treatment and disposal, which was setup under PPP model in collaboration with NDMC. About 325-350 MTPD MSW is generated in NDMC area and NDMC is paying Rs. 2271 per metric tonne of waste to M/s. Metro Waste Handling Pvt Ltd. for collection, compaction and transportation of waste to waste to energy plant, Okhla.

4. Composting of Horticulture Waste in NDMC Area

NDMC area is having 49% green area where approximately 20 to 30 MT of horticulture waste is generated per day. Most of the horticulture waste is segregated at the source of generation i.e. large parks in NDMC area. There are four Refuse Derived Fuel (RDF) having 2 metric tones capacity plants located in four large gardens of NDMC i.e. Lodhi garden, Nehru park, Talkatora garden, and India gate. In addition to it, there are 39 compost pits of varying capacity in large gardens of NDMC area. The big twigs and stems are collected and disposed of at compost plant, Okhla. There are ten schools which are having compost pits in its area for creating awareness in students & bringing out behavioral change. In addition, the vegetable waste from two markets (Udhyan Marg & Sarojini Nagar) in NDMC area is also being disposed of at compost pits in Talkatora garden and Sanjay Jheel parks.

5. Management of Sewage in NDMC Area

As information provided by NDMC that all the sewer lines falling under NDMC jurisdiction are maintained by NDMC Sewer Maintenance Department. Repairing/maintaining of sewer system is the responsibility of NDMC, however lying and connecting the lines to main sewer is the sole responsibility of the consumer, to be executed through any

registered plumber under the supervision of NDMC staff. Regarding disposal of sewage, NDMC is not doing any treatment but 100% sewage is transported to DJB sewer lines for further treatment and charges for such treatment is paid to DJB by NDMC which is about 80% (Approx.) of water consumption charges being paid by NDMC. Cleaning of sewer lines is done mechanically and no human intervention is allowed. No sewer silt etc. is removed manually or kept on road side as informed by NDMC.

6. Conclusion & Recommendations

The Members of Sub-committee-1 visited 16 Hotels under the category of four and five star and three Hospitals, namely, RML Hospital, Lady Harding Medical College and Hospitals, Sucheta Kripalani & Kalawati Saran Hospitals having more than 200 beds. Kalawati & Sucheta Kripalani Hospitals are under the management of Lady Hardinge Medical College & Hospitals. These Hotels and Hospitals were asked to send duly filled-in checklists for verification of waste management and sewage treatment facilities. Traversing through the documents, filled-in questionnaires/ checklists, site visits and other information, the following recommendations are made:

- 6.1 Effluent samples from STPs and ETPs were collected from all the hotels concerned. Vivanta Hotel, Royal Plaza Hotel, Ashoka & Samrat Hotels, Taj Palace, The Leela, Hotel Metropolitan and The Lalit Hotel are not complying with the stipulated effluent discharge standards for BOD and TSS. The effluent standards for BOD in Hotel Claridges and Hotel Maurya are slightly above i.e. 32 and 34 mg/l, respectively, as against the prescribed standard of 30 mg/l. Out of the total 16 Hotels surveyed/ inspected, 8 Hotels are not complying with the prescribed effluent discharge standards. Therefore, it is suggested that appropriate action may be taken against the above 8 defaulting Hotels. However, in case of Hotel Claridges and ITC Maurya, it is advised to operate their STPs/ ETPs properly to comply with prescribed standards, as these 2

Hotels are marginally above the stipulated standard for BOD. The BOD in respect of other defaulting hotels, as mentioned above were found well above the prescribed level of 30 mg/l, and as such these hotels are required to be issued show cause notice for appropriate action against them.

- 6.2 There was no ETP/ STP in RML Hospital. The Committee was informed that ETP is under construction and likely to be commissioned within 6 months period. There was no proposal for establishment of STP in RML which goes against the Bio-medical Waste Management Rules, 2016. In view of the shortcomings, appropriate action may be initiated against RML Hospital for expediting establishment of ETP and STP. Also, it was observed that the bio-medical waste is stored in a non-air-conditioned room from where it was lifted by the approved vendor. RML may be directed immediately to make provision of an air-conditioned room (temperature 4-5° C) to avoid putrefaction of the waste which may result in foul smell/ odor problems in adjoining areas. In addition, autoclaving/ microwaving facilities are required to be established urgently by RML.

As far as Lady Harding Medical College and Hospital is concerned, there was no STP provided which is the requirement as per the new Bio-medical Waste Management Rules, 2016. Obviously, it is in violation of the Rules that there is no STP existing for treatment of sewage generated by the Hospital. The management of Lady Harding Medical College and Hospital may be advised/ instructed accordingly to provide for sewage treatment facilities including augmentation of ETP Plant which prima-facie was not appearing to be operating well.

- 6.3 Regarding the management of MSW by NDMC, it was observed that the earlier existing Dhallaos (Garbage collection places) have been phased out totally with large garbage bins. The garbage collected in these bins is lifted by compactors. The garbage so collected is then transported to waste

compacting unit located in front of Safdarjung Hospital on the Ring Road. The garbage after being compacted is then transported directly in closed containers to Waste to Energy Plant at Okhla. The system for management of municipal solid waste in NDMC is proper and well maintained.

- 6.4 The Committee Members also visited Lodhi Garden where horticulture waste is converted into manure by composting process. The manure so produced is utilized for horticulture within the Lodhi Garden area.
- 6.5 It is heartening to note that right from door-to-door collection, transportation and final disposal of waste to Waste to Energy Plant (WTEP) located at Okhla, the entire operation is done following the PPP Model and is being maintained and operated fairly well by M/s Metro Waste Handling Pvt. Ltd. NDMC is paying Rs. 2271/- per MT of waste to the agency concerned as handling, storage, and final transportation to Okhla Processing Plant.
- 6.6 The Committee Members also took the opportunity of visiting Pillanji village which falls in Lal Dora category of villages, which enjoys certain privileges right from the British period. NDMC rules & regulations and Building Bye-laws are not strictly applicable to such area/village. However, NDMC had provided collection, transportation and disposal facility for municipal solid waste generated from this village by deploying staff and garbage collection bins which are ultimately carried through auto tippers and finally sent to compactor unit located near the Safdarjung from where it is ultimately sent to Okhla processing plant. During the inspection, it was reported that residents are throwing their garbage on the road particularly in morning from their houses which collected by the NDMC staff and transferred to the bins provided for the purpose. It was observed that one shopkeeper has littered the garbage in front of his shop and NDMC staff started proceedings of challan in front of the Committee against the shopkeeper.

Even though NDMC has taken lot of steps for management of MSW and their PPP Model appears to be working well, but still there appears to be room for further improvement by way of adopting economic instruments which may include incentives and disincentives to the residents.

As far as schools having hostel facilities of more than 500 students and group housing societies having more than 300 flats are concerned, we were informed by NDMC that there are no such establishments within the NDMC Area.

6.7 Regarding waste being generated by the Railways, it was informed by NDMC that no railway station is located in NDMC Area, except for small local train station at Sarojini Nagar, Lodhi Road, etc. Metro stations in NDMC Area are maintained nicely and there is no need to have inspection of metro station facilities.

6.8 There was no representation from Director General of Health Services (DGHS) in spite of being a Member of the Committee as per the composition of the Sub-Committee-1. MoEF&CC may like to take up the matter with Ministry of Health and Family Welfare .

6.9 A suitable action may be taken against 8 defaulting Hotels namely Hotel Vivanta, The Royal Plaza Hotel, The Ashoka Hotel, The Samrat Hotel, Taj Palace Hotel, The Leela Hotel, Hotel Metropolitan and The Lalit Hotel for not complying with the prescribed limit for STPs/ETPs.

Similarly, in respect of RML Hospital and Lady Hardinge Medical College and Hospitals for not providing STPs and autoclaving/microwaving facilities, action may be taken as per

Bio-Medical Waste Management Rules, 2016, at the earliest, for the protection of environment and human health.

Dr. Ramakant /
Ms. ChaitraDevoor
MoUD representative

Mr. VinayGangal
CPCB representative

Dr. (Mrs.) S. Srivastava
NDMC representative

Dr. G.K. Pandey
Chairman Sub-Committee-1

ANNEXURE 'A'

List of Bulk Garbage Generator in NDMC Area		
S. No.	Name of Organization	Circle No.
1.	The Hotel Royal Plaza, Ashoka Raod	1
2.	The Imperial, Janpath	1
3.	Shangrila Hotel, Ashoka Raod	1
4.	Hotel Janpath, Janpath	1
5.	The Park, Parlaiment Street	1
6.	The Metropolitan Hotel & SPA, Gurudwara Bangal Sahib Road.	3
7.	Le-Meridien Hotel, Janpath	4
8.	Lalit Hotel Limited, Barakhamba Lane	5
9.	The Taj Mahal Hotel, Man Singh Road	6
10.	Vivanta, Subramanyam Bharti Marg	6
11.	The Claridges, Aurangzed Raod	7
12.	ITC Mourya, S. P. Marg	10
13.	Taj Palace, S. P. Marg	10
14.	The Ashok, Diplomatic Enclave	10
15.	Hotel Samrat, Diplomatic Enclave	10
16.	The Leela Palace Hotel, Africa Avenue, Netaji Nagar	12

Preliminary Report of Sub-Committee —II (SDMC Area) on Inspection of Bulk Waste Generators and Hospitals

The Committee constituted by Hon'ble National Green Tribunal in its order dated 10/1/2017 had convened two meetings with all stakeholders at MoEF&CC. The second meeting of the committee was held on 23/01/2017, wherein the following 4 sub-committees were constituted to cover the area of NCT, Delhi:

New Delhi Municipal Council	Hon'ble Dr G.K. Pandey, Former Member, NGT
South Delhi Municipal Corporation	Hon'ble Dr D.K. Agarwal, Former Member, NGT
North Delhi Municipal Corporation	Dr. R. Daiwani., Former Advisor, MoEF & CC
East Delhi Municipal Corporation	Dr. Rashid Hasan, Former, Advisor, MoEF&CC

Sub-committee constituted under Hon'ble Dr D.K. Agarwal for South Delhi Municipal Corporation Area has initiated inspection of Bulk Generators like Hotels, Motels, Hospitals etc. on 07.02.2017 and completed inspection of **38 number of units** including Hospitals, Hotels etc. located in South Delhi in compliance to the instructions of Hon'ble Tribunal on 03.02.2017. As per the list available, In South Delhi Municipal Corporation limits over **170 bulk generators** are to be inspected. The list of units inspected so far along with general observations are given below (*observations are very general since complete information on samples collected at inlet/ outlet of STP; utilization of treated water for various usage, ground water abstraction; compliances to other environmental norms, etc. is being compiled and synthesized for proper presentation of results*):

S. No.	Name of the Unit	Address	Observations
1	Trivoli Garden M/s TG Leisure & Resort Pvt. Ltd.	Trivoli Garden, Kh. No. 646-653	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
2	M/s Lillywhite	Kh. No. 772, 773, 774 Main Road Chhattarpur	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP operational however condition of STP revealed that it was not operated on regular basis. 3. Solid waste is given to vendor, without knowing their final disposal practices.
3	M/s. GK Motel Pvt. Ltd.(Oodles)	Kh. No. 759, 762 Chhattarpur Main Road	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP partially operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
4	M/s Trillion	Kh. No. 218/3/3 MG,	1. No Segregation of solid waste. Mixed waste

	A unit of Trillion Road Motels, Pvt. Ltd.		is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
5	M/s Lutyen's Unique Innovation Pvt. Ltd.	Kh. No. 222, 223 M.G Road	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
6	M/s Fortune Park Motel A unit of Penguin Farm Pvt. Ltd.	Kh. No. 417, MG Road Ghitorni	1. Dry and Wet Segregation of solid waste observed however there is scope for further improvement in training /practices. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
7	Vista Hotel M/s Vista Hospitality, Pvt. Ltd	Kh. No. 162-165, MG Road Sultanpur	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
8	Zorba Entertainment, Pvt. Ltd.	M.G. Road, Sultanpur, New Delhi.	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. No ETP/ STP installed. 3. Solid waste is given to vendor, without knowing their final disposal practices.
9	M/s Ocean Pearl Retreat Motel Ocean Pearl Hotel Pvt. Ltd.	Kh. No. 83, 84, 85,90, 91/1-2, 101, 102 Chhattarpur, Village Satbari	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
10	M/s Mapple Exotica, A unit of Nine Dimension Hotel & Resort	Kh. No. 5, 6, 7, 8, 9, 11 Sharurpur Fatehpur	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational however bypass system found existing. 3. Solid waste is given to vendor, without knowing their final disposal practices.
11	M/s Opulent,	Kh. 988, Village-Chandan Holla, chhattarpur	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
12	M/s Golden Tullip Louvre Hotel Groups	Kh. No. 241, 244, 245, 246, 249 Asola	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.

13	M/s Fortune Park Boulaverd Motel A unit of Rantara Resort Pvt. Ltd.	Kh. No. 73/3 Village Bhatti	<ol style="list-style-type: none"> 1. Dry and Wet Segregation of solid waste observed however there is scope for further improvement in training /practices. 2. Installed STP found operational 3. Solid waste is given to vendor, without knowing their final disposal practices.
14	M/s Country Inn by Carlson, D.J. Builder	A-1 Distt. Centre DLF South Court Saket	<ol style="list-style-type: none"> 1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
15	M/s Radiance Motel A unit of Radiance Motels	Kh. No. 268/2, 269, 270, 271/2, Village Satbari	<ol style="list-style-type: none"> 1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed ETP instead of STP and observation revealed that it was not operated regularly. 3. Details of Solid waste disposal could not be provided.
16	AIIMS	AIIMS Campus, Ansari Nagar East, New Delhi, Delhi 110029	<ol style="list-style-type: none"> 1. Segregation of bio medical waste (BMW) is practiced. Hospital is in process of implementation of BMW rules 2016. There is scope for further improvement in practices/training. 2. Installed STP was found operational. 3. BMW is disposed through CBWTF located in SMA industrial Area.
17	Jai Prakash Narayan Apex Trauma Center AIIMS	AIIMS, Ring Road, Chaudhary Harsukh Marg, Sarojini Nagar, Raj Nagar, Safdarjung, New Delhi, Delhi 110029	<ol style="list-style-type: none"> 1. Segregation of bio medical waste (BMW) is practiced. Hospital is in process of implementation of BMW rules 2016. There is scope for further improvement in practices/training. 2. Installed STP was found operational. 3. BMW is disposed through CBWTF located in SMA industrial Area.
18	Safdarjung Hospital	Ring Road, Opposite AIIMS Hospital, Safdarjung West, Safdarjung Campus, Ansari Nagar East, New Delhi, Delhi 110029	<ol style="list-style-type: none"> 1. Segregation of bio medical waste (BMW) is practiced. Hospital is in process of implementation of BMW rules 2016. There is scope for further improvement in practices/training. 2. Hospital has not installed STP. 3. BMW is disposed through CBWTF located in Nilothi industrial Area.
19	Hotel Hyatt Regency	Ring Road Near Bhikaji Cama Place, New Delhi	<ol style="list-style-type: none"> 1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
20	JW Marriott Hotel New Delhi Aerocity	Asset Area 4, Hospitality District, Delhi Aerocity, New Delhi, Delhi 110037	<ol style="list-style-type: none"> 1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational.

			3. Solid waste is given to vendor, without knowing their final disposal practices.
21	Pride Plaza Hotel Aerocity,	Asset 5A, Hospitality District, Aerocity, Indira Gandhi International Airport, New Delhi, Delhi 110037	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
22	Hotel Novotel Aerocity	Asset No 02, GMR Hospitality District, IGI Airport, New Delhi, Delhi 110037	1. Dry and Wet Segregation of solid waste observed however there is scope for further improvement in training /practices. 2. Installed STP found operational. The unit is having common STP with hotel Pullman. 3. Solid waste is given to vendor, without knowing their final disposal practices.
23	Hotel Pullman Aerocity	Asset No 02 GMR Hospitality District, New Delhi, 110037	1. Dry and Wet Segregation of solid waste observed however there is scope for further improvement in training /practices. 2. Installed STP found operational. The unit is having common STP with hotel Novotel. 3. Solid waste is given to vendor, without knowing their final disposal practices.
24	Andaz Delhi	Asset No.1, Aerocity, New Delhi, Delhi 110037	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
25	Lemon Tree Premier,	Asset No. 6, Hospitality District, Aerocity, Indira Gandhi International Airport, New Delhi, Delhi 110037	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
26	Roseate House	Asset 10, Hospitality District, Aerocity, Indira Gandhi International Airport, New Delhi, Delhi 110037	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
27	Fortis Hospitals	Aruna Asif Ali Road, , New Delhi	1. Segregation of bio medical waste (BMW) is practiced. Hospital is in process of implementation of BMW rules 2016. There is scope for further improvement in practices/training. 2. Installed STP was found operational. 3. BMW is disposed through CBWTF located in Nilothi industrial Area.
28	Jaypee Vasant Continental Hotel	Vasant Vihar, New Delhi, Delhi 110057	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.

29	Institute of Liver and Biliary Sciences	D-1, Vasant Kunj, New Delhi, Delhi 110070	<p>1. Segregation of bio medical waste (BMW) is practiced. Hospital is in process of implementation of BMW rules 2016. There is scope for further improvement in practices/training.</p> <p>2. Installed STP was found operational.</p> <p>3. BMW is disposed through CBWTF located in SMA industrial Area.</p>
30	Holiday Inn New Delhi International Airport	Asset Area 12, Aero City Hospitality District, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
31	Hotel ibis Aerocity	Asset no 9, Hospitality District, Aerocity, Indira Gandhi International Airport, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
32	Radisson Blu Plaza	National Highway 8 Mahipalpur Enhancement New Delhi, Delhi N.C.R	<p>1 Dry and Wet Segregation of solid waste observed however there is scope for further improvement in training /practices.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
33	The Umrao Hotels and Resorts pvt.ltd	National Highway - 8, Samalkha, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
34	M/S Shanti Hospitality pvt. Ltd (Four Points by Sheraton),	Plot No 9, National Highway - 8, Samalka, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
35	The Roseate	Samalka, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
36	Orana Hotels and Resorts(A unit of Friendshiptime .com pvt.ltd)	Westend Greens, Near Shiv Murti, NH8, Delhi-Gurgaon Expy, New Delhi, Delhi 110037	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2. Installed STP found operational.</p> <p>3. Solid waste is given to vendor, without knowing their final disposal practices.</p>
37	J.J.V Marketing Hotel Pvt. Ltd (The Nikunj).	22-milestone NH-8 Samalkha New Delhi 110038.	<p>1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016.</p> <p>2 Installed STP found operational.</p>

		3. Solid waste is given to vendor, without knowing their final disposal practices.
38	Mapple Emerald Rajokri, NH8, New Delhi, Delhi 110038	1. No Segregation of solid waste. Mixed waste is collected in single bins against the SWM Rules, 2016. 2. Installed STP found operational. 3. Solid waste is given to vendor, without knowing their final disposal practices.
39	The Hotel Grand, Vasant Kunj, New Unison Hotel Pvt. Delhi Ltd.	Inspection to be continued as it was not completed due to paucity of time.

Two bin solid waste collections is required to be practiced in most of the units in accordance with the Solid Waste Management Rules, 2016. Segregation of waste and training of concerned staff needs to be strengthened in all places of bulk waste generators and hospitals visited so far. Most of the units are disposing their solid waste through private vendors and the final disposal practices were not known.

Detailed reports of aforesaid bulk waste generators/Hospitals will be submitted along with other inspections planned in coming days.

D.K. Agrawal

Chairman, Sub-Committee-II

INSPECTION REPORT

ON

**BULK WASTE GENERATING INSTITUTIONS IN
NORTH DELHI**

INSPECTIONS CONDUCTED DURING
FEBRUARY 6 – 14, 2017

SUBMITTED BY

**SUB- COMMITTEE-III OF THE COMMITTEE
CONSTITUED BY HON'BLE NGT IN THE MATTER OF
199/2014 & 281/2016**

Co-convener
Ex. Engg., DPCC

Member Convener
Addl. Dir., CPCB

Chairperson
Former Adviser
MoEF & CC

Background

Pursuant to the orders dated 10.01.2017 and 11.01.2017 of Hon'ble National Green Tribunal in Original Application No. 199 of 2014 in the matter Almitra H. Patel versus Union of India and Application No. 281 of 2016 in matter of Kudrat Sandhu vs. Government of NCT of Delhi, the Government of India, Ministry of Environment, Forest and Climate Change constituted a Committee with the following composition:-

(i)	Special Secretary, Ministry of Environment, Forest and Climate Change- Chairman
	Expert Members
	Mr. G.K. Pandey, Former Member of NGT.
	D.K. Agarwal, Former Member of NGT.
	Dr. R. Dalwani, Former Advisor, Ministry of Environment, Forest and Climate Change
	Dr. Rashid Hasan, Former Advisor, Ministry of Environment, Forest and Climate Change
	Official Members
(ii)	Representative from Ministry of Urban Development
(iii)	Representative Officer of Indian Railway
(iv)	Representative from Ministry of Environment, Forest and Climate Change
(v)	Representative from Director General of Health Services
(vi)	Representative of NCT, Delhi- Principal Secretary (Urban Development)
(vii)	Representative from Central Pollution Control Board
(viii)	Representative from Medical Council of India
(ix)	Representative of Delhi Pollution Control Committee
(x)	Representative of Delhi Development Authority
(xi)	Representative of each Municipal Corporations
	Co-opted Members
(xii)	Representative of Delhi Jal Board
(xiii)	Representative of Delhi Cantonment Board
(xiv)	Representative of Central Public Works Department

(xv)	Registrar, Co-operative Group Housing Society
(xvi)	Joint Secretary (HSM Division), Ministry of Environment, Forest and Climate Change – Convener

The **Terms of Reference of the Committee** are as under:

- (i) The Committee is entitled to form different sub-committees from amongst above which will visit the various locations of Delhi where are the mass generator of waste are located and submit their report to the Tribunal.
- (ii) These sub-Committees would be entitled to direct assistance or participation of any of the Public Authorities, Corporations, Local Authority, DDA or any other Government and Semi-Government whenever they require participation of any officer of Governments or Authorities. They shall, without demur and delay provide due assistance to these sub-Committees with a view to comply with the directions contained in this order.
- (iii) This Committee/Sub- Committee so constituted shall inspect
 - a. all four and five star hotels,
 - b. all hospitals which are more than 200 bedded whether private or Government,
 - c. the Co-operative Group Housing Societies (more than 300 flats), markets,
 - d. shopping malls having built up area of more than 50000 Sq.Mtrs.,
 - e. Colleges having hostel and accommodating more than 500 students, and
 - f. Such other places in entire NCT, Delhi in the first instance.
- ii. The Committee, upon physical inspection, shall submit its report as to the quantum of different kind of waste generated by such hospitals, hotels, schools, group housing societies, market, shopping malls etc. The waste would include municipal solid waste, inert waste, biomedical waste, hazardous waste, dust and such other allied waste like ash etc.
- iii. The Committee shall also report as to how waste, so generated, is being processed and treated by the above mentioned waste generators. If waste is being

transported, the manner and method thereof, and destination of such transportation of waste will be reported.

- iv. The Committee shall also report on the markets, hospitals, hotels, schools, group housing societies, shopping malls etc. that have their own STPs or are connected to sewerage network. If they have STPs of their own, their capacity in comparison to the sewage generated and the manner in which treated sewage water is being recycled at the point of discharge will be indicated.
- v. In relation to hospitals, the Committee shall inspect/ examine the manner in which bio-medical waste is being handled, and other factors prevailing in the hospital adverse to human health and environment will be examined.
- vi. The Committee shall submit a Report, in regard to hospitals, for the following:-
 - a. Generation of bio-medical wastes
 - b. Generation of Municipal Solid Wastes
 - c. Generation of Hospital hazardous wastes.
 - d. Waste generated from pathological laboratories and sewage system and
 - e. causes for hospitals infection and remedies for prevention.
- vii. The Committee shall submit a Report, in regard to other institutions afore- indicated for the following:
 - a. Generation of Municipal Solid Wastes,
 - b. Sewerage system and
 - c. Other kind of wastes.
- viii. The Committee shall specifically record, whether the aforementioned places/ institutions are compliant to the law in force i.e. treatment of Sewage Rules of 2016, provision of Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981, Environment (Protection) Act, 1986 or any other environmental law in force.
- ix. If found lacking or non-compliant, the committee shall issue show cause notice as to why the defaulting institution/ body not be directed to pay Environmental Compensation and also remedy and rectify deficiency and defects within a stipulated period. The show cause notice should be issued by the Committee itself requiring them to remedy, rectify all deficiencies, defects and shortcomings and if needed, require them to install anti-pollution devices including STP's etc. Notice to such persons would also mention as to why they be not called

upon to pay environmental compensation determined by the Tribunal in accordance with law.

- x. The Committee shall submit a report to the Tribunal **within six weeks from 10.01.2017.**

Constitution of Sub-Committee-III:

The Present Report covers the inspection outcome of Sub-Committee-III required to visit locations identified by the Committee and under the jurisdiction of the North Delhi Municipal Corporation. The Committee's composition is as under:

Sr. No.	Name	Status
(i)	Dr. R. Dalwani, Former Advisor, Ministry of Environment, Forest and Climate Change	Chairman
(ii)	Representative of North Delhi Municipal Corporation- 1. Sh. Nitin Pramod (City Zone) 2. Sh. Devesh Singh (S.P. Zone) 3. Sh. Ajay Kr. Gupta (K.B. Zone) 4. Sh. Deepak Prohit (C. L. Zone) 5. Sh. Jagdeep Chhillar (Rohini Zone) 6. U.C. Bhardwaj (Narela Zone)	Nodal Officers
(iii)	- Sh. R.K. Singhal Supd. Engineer((North), Delhi Jal Board	Members
(iv)	Representative of Medical Council of India – to be nominated by MCI	Members
(v)	Sh Sathish Kumar, Tech Officer Ministry of Urban Development	
(vi)	Representative of India Railways- to be nominated the Railways	Members

(vii)	Sh. R. O. Siddiqi SE/Civil Circle-12) (Sh. K.K. Garg SE/HQ, Delhi Development Authority	Members
(viii)	Representative of Delhi Pollution Control Committee - Environmental Engineer (EE)	CoConvener
(ix)	Representative of Central Pollution Control Board – Scientist-E	Member Convener

Inspections by Sub-Committee-III:

The first meeting of the sub-Committee-III of the Committee constituted by the Hon'ble NGT in the matter of Almitra H. Patel Vs Union of India &ors (199/2014) and 281/2016 was held in the Conference Hall of Civic Centre, North Delhi Municipal Corporation on 06.02.2017 (11.30 AM).

Dr. (Mrs) R. Dalwani, Chairperson of the Sub-Committee-III and Former Adviser (MoEF&CC) chaired the meeting and briefed the objectives of the meeting i.e. compliance to the Hon'ble NGT order dated 10.01.2017. The Chairperson also informed all the members of the Sub-Committee that inspection report to be submitted to the Hon'ble NGT' by 16th February, 2017 and requested all members to chalk out inspection program for compliance of aforesaid NGT order. The chairperson reiterated in the meeting that all the members of the sub- committee should be present in the inspection team.

The North Delhi Municipal Corporation (NDMC) agreed to provide logistic support for conducting the inspection for bulk waste generator establishments and informed that the Deputy Commissioners of each zone (Nodal Officers) shall co-ordinate the inspection team. Accordingly, North MCD identified and provided the list of 45 Bulk waste generators for conducting inspection. However, owing to the time constraint and large number of bulk generators, representative samples were identified on priority by the Sub-Committee-III for the present report as under;

1. City Zone (Inspection date: 6th February, 2017)

- (i) LNJP Hospital
- (ii) New Delhi Railway Station'

Nodal Officer: Sh. Nitin Pramod, DC, City Zone, Mob: 8588887155

2. Civil Line Zone (Inspection date: 07-02-2017)

- (i) Oberoi Maidan

- (ii) Hindu Rao Hospital
- (iii) Tirath Ram Hospital
- (iv) Mukherjee Nagar SFS (housing)

Nodal Officer: Sh. Deepak Prohit, DC, Rohini Zone, Mob: 8130892295

3. Narela Zone (Inspection date: 08-02-2017)

- (i) Raja HarishChandra Hospital
- (ii) DDA Police Colony, Sector A-3, Pocket-6
- (iii) Narela Railway Station

Nodal Officer: Sh. U.C. Bharadwaj, DC, Narela Zone, Mob: 8588889430

4. Rohini (Inspection date: 9th -11th February, 2017)

- (i) Crown Plaza (Hotel)
- (ii) Rajeev Gandhi Cancer Hospital
- (iii) Fortis, Shalimar Bagh
- (iv) Ekta End, Peeragarhi
- (v) Neelkanth, Rohini
- (vi) Ambience Mall
- (vii) Delhi College of Engineering
- (viii) Bus Depot, Sector 3 complex

Nodal Officer: Sh. Jagdeep Chhillar, DC, Rohini Zone, Mob: 8130892295

5. Karol Bagh Zone (Inspection date: 13-14th Feb, 2017)

- (i) Hotel Siddharth, EPN Pusa Road
- (ii) Ganga Ram Hospital
- (iii) Moments Mall, Kirti Nagar
- (iv) IARI, Pusa
- (v) Sarai Rohila Railway Station

Nodal Officer: Sh. Ajay Kumar Gupta, DC, Karol bagh Zone, Mob: 7042293927

Observations:

A Detailed Report on individual bulk waste generating establishment along with site photographs, is enclosed as Annexure – I. Based on the individual observations, common observations and recommendations have been arrived at and these are given below

Hospital wastes:

- (a) **Generation of Bio-medical Waste (BMW):** The total generation of BMW from 13 Nos. of Hospitals in North MCD areas is about 2800 kg/day. Based on the data/information received, the quantity of BMW generation is assessed 480gm/day per bed including outdoor patients. The category-wise BMW generation is also assessed as under;

Quantity of BMW	Categories of Wastes			
	Yellow	Red	Blue	White
Kg/day	1081	1194	379	146

(b) Generation of Municipal Solid Waste (Non-infectious):

- (i) Quantum - unknown, No record maintained by any hospital.
- (ii) The General waste is not segregated at source and the same is collected separately and disposed at Municipal dhalaos or through private vendors for final disposal at landfill sites.

(c) Generation of Hospital Hazardous Waste:

- (i) Mercury waste generation is not observed due to change/advancement of technology for medical instruments i.e. Thermometer (non-breakable) or BP measuring sets.
- (ii) Sludge is collected in ETP before disinfection/chlorination of treated wastewater, which leads to the ETP sludge remaining as biologically active. The hospital should dispose the ETP sludge as per BMW Rules and its use as manure should be prohibited.

(d) Waste generated from Pathological Laboratories and Sewage Systems:

- (i) Some of the Hospitals are not following the pre-treatment of infectious wastes from pathological/microbiological laboratories as prescribed in the BMW Rules. Most of the hospitals have ETPs with filtration, softening and disinfection in the post-treatment process. Most of these ETPs are set up in the basement/underground without any proper ventilation. **Proper air supply should be ensured for functioning biological process in the ETPs.** Wastewater generation in 13 Hospitals assessed to be 1562 KLD. In 7 hospitals are treating effluents in ETPs- 772 KLD (49%).

(e) Causes for hospital infections and Remedies for prevention:

- (i) The possible causes of hospital infections as per observations include; absence of pre-treatment of blood samples, blood infected wastes, pathological lab discharges. Absence of separate temporary storage facility for BMW and general wastes; and also absence of on-site ETP with post treatment for disinfection.

(f) General observations for BMW Management:

- (i) No collection of BMW during weekends by the contractors. Therefore, the storage of wastes during weekends is for about 48 hrs.
- (ii) The storage area of BMW is washed with disinfectant which is being discharged into the ETP for treatment.
- (iii) With respect to BMW Rules, 2016, the bar coding of waste storage bags and uploading of information on BMW on website is not followed by most of the hospitals.

Generation of Municipal Solid Waste

1. Hotels: (3 Nos.)

Three Hotels were inspected and assessed generation of solid waste 1100kg/day. The sources of solid waste generation identified in Hotels are – Guest rooms, restaurants, kitchen, toilets, banquet Halls, Horticulture areas. Segregation is as dry and wet waste. The dry waste is dumped into Municipal Dhalaos and the wet waste including biodegradables are taken for composting. The recyclables are materials from dry wastes are collected by the vendors. Hotels maintaining record of waste generation and disposal. Segregation is followed.

2. Railway stations (04 Nos)/Bus Depot (7 Nos.)

- (i) In almost all the railway stations have no two bin system. Even though two coloured bins are already provided separately in the platforms of Narela. However, no source segregation of waste is being followed in any of the Stations. However, in New Delhi railway station the segregation of mixed waste is being done. The sweeping and housekeeping in most of the stations were outsourced to private contractors.
- (ii) In bus depot the solid waste is being collected and dumped into the nearby dalao without any segregation and treatment. No proper maintenance of the records for waste generation and disposal.
- (iii) Sewer lines were not there in many of the places.

3. Residential Complex (12Nos.)

- (i) Total 12 Residential Apartments in North Delhi consist of 4514 flats to live 17,540 people. Solid Waste generation is approx. 5427 kg/day. No source segregation of waste into three separate streams is being followed even though the collection of waste from the households is being outsourced to the private contractors. The mixed waste collected in the premises is being dumped in the nearby dhalaos and no existence of onsite treatment facility within the premises.

4. Educational Institutions with Hostel facility (2 Nos.)

- (i) Solid waste generation from these two institutions was observed as 5065kg/day. No source segregation of waste into three separate streams is being followed. In some of the institutions biogas plant has been installed within the premises to treat the organic waste (kitchen & horticultural) generated within the campus with the use of generated gas in the canteen kitchen. However, the plant was not operational during the visit of the committee. No proper documentation of the quantity of waste being generated and disposal of the same.

5. Shopping Complex /Malls (4 Nos)

- (i) The solid waste is being generated is being managed by private contractor. However, the organic waste is dumped in the nearby dhalaos by the private contractor and management is not aware of the disposal process.

Sewerage System

1. Hotels:
 - (i) Some of the Hotels have ETP for treating wastewater and utilizing treated wastewater for horticulture and toilet flushing.
2. Railway stations/Bus Depot
 - (i) Recycled water of 12000 L/day is being supplied by DJB for washing the buses.
 - (ii) The wastewater generated from **washing shop** is discharged into the sewer line without any treatment. The oil & Grease is not trapped before discharge.
3. Residential Complex:
 - Wastewater generations is not assessed and discharged directly into the city sewer line without treatment.
4. Educational Institutions with Hostel facility
 - Wastewater generations is not assessed and discharged directly into the city sewer line without treatment.
5. Shopping Complex /Malls
 - Each shopping complex has ETP.
 - Wastewater generation in these 4 Malls has not been assessed.

Other kind of waste

1. Floor washing with disinfectants/bleaching powder is drained out. Such effluent may impact biological treatment in ETP/STP.
2. Waste generation Railway tracts. Needs to adopt Bio-toilet for all trains across the country.
3. Horticultural waste in Educational Institutions.
4. Oil & Grease in workshops of Bus depot

Summary:

The quantity of waste /effluent generated by bulk generators:

- Total BMW- 2800 kg/d
- Solid Waste- 15435 kg/day (excluding solid waste generated from the hospitals)
- Wastewater- 2038 KLD.

Recommendations:

A. Bio-medical Waste:

1. Barcoding & uploading of information by March, 2017 by all hospitals as per Bio-medical Waste Rules, 2016.
2. Guidelines for disposal of ‘‘sharps’’ to be revisited in r/o Bio-medical Waste Rules, 2016. Increased number of tamper proof plastic containers to be disposed off every 24 hours may lead to large quantity of plastic in incinerators.
3. Hospitals may also give priority to general solid waste for Segregated collection followed by Disposal as per SWM Rules, 2016.
4. The storage of BMW in hospital premises may not be along with the general solid waste.
5. The BMW storage may not exceed 24 hours in hospital premises. The contract with vendors be accordingly modified.
6. Pre-treatment of path-lab waste or other infectious material to be ensured by all hospitals.
7. Training protocols need to be designed for doctors, nursing staff and other hospital staff for management of BMW & general solid waste and meticulously followed.
8. The BMW Rules may form a part of compulsory subject in the MBBS & nursing curriculum.

B. Solid Waste:

1. Source segregation of waste into three separate streams as specified in solid waste **management** rules 2016 should be implemented immediately in all bulk generating facilities.
2. **All new housing colonies/ societies/ institutions to adopt solid waste management as per SWM Rules, 2016.** Decentralized waste treatment systems like Organic Waste Converters or other low cost composting techniques may be employed in the residential and institutional complexes for treating the organic waste within the premises as far as possible. In case of areas where the decentralized treatment system is already in place, the same may ensure proper operation and maintenance.
3. **in terms of segregation and recycling with manure formation.**
4. Proper cleaning of the Railway tracks may be ensured by the station-in-charges. Proper fines shall be levied on the litterers as per the existing rules or policy of railways.
5. **Supply chains like Big Bazar having large number of outlets may establish de-centralised composting facilities for their fruit/vegetable residues** within a specified timeframe, .
6. Unauthorized dumping of waste around the dalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.
7. **Besides considering setting up of waste to energy plants , MCDs/ Bulk generators may consider adopting Railways model of using NGO services for segregation and manure preparation or recycling of used paper.**

8. All the recyclables generated by all the bulk generators may be given only to the authorized recyclers and only the inerts shall be given to the MCD workers for disposal. Proper records on the same may be maintained by them. Heavy fine be imposed on the defaulters by the MCD.
9. Proper documentation of the solid waste generated in the residential and other institutional campuses may be quantified on daily basis and proper records of the same along with the quality may be maintained by the RWAs/other bulk generators.
10. Fine may be levied by the MCD on the defaulting households/individuals/bulk generators.
11. **MCDs and other educational institutions to hold awareness programs for all sections of people/ institutions/ bulk generators.**

C. Sewage management:

1. **All bulk generators must provide required post treatment to their sewage/liquid waste and ensure zero waste discharge through recycling and reuse of treated sewage.**
2. The existing STP's/ETP's in all the bulk generation facilities may be monitored for adequacy and efficiency by a certified third party auditor and be submitted to the concerned PCB/PCC.
3. Proper documentation may be maintained on the generation of sewage/effluent and their disposal procedures.
4. All the bulk generators excluding the existing residential complexes to setup an STP/ETP within a time frame to be stipulated by the Hon'ble NGT.
5. Proper lined drainage system to be provided along the sides of railway tracks for the collection of wastewater from track washings which may be connected to the STP or the sewer system.
6. To achieve data authenticity from labs testing inlet & outlet quality, the labs accredited by MoEF&CC/NABL may also be subjected to regular Quality Control by CPCB/NABL.

General Comments & limitations:

- North MCD is the largest municipal authority in NCT Delhi with 6 zones and 46 bulk generators as per the list provided. The inspection of each establishment in available time frame was nearly impractical. Therefore, representative samples were identified restricting the inspections to 21 establishments with information/data in desired format furnished from the remaining establishments. The report is however based on both the inspections and the data provided through these formats.
- Some departments kept as members of the sub-committee, were not present during all the inspections.
- Some of the establishments/ institutions e.g. IARI did not co-operate in providing details of waste generation or facilitating in site visit in their campus.

DETAILED INSPECTION REPORT**A. CITY ZONE : INSPECTION DATE: 06.02.2017****1. LNJP –HOSPITAL**

Lok Nayak Jay Prakash (LNJP) is a Government Hospital situated at J.L.N. Road, New Delhi and was established in the year 1935. It has capacity of 1890 beds, 5000 outdoor patients visit every day and 1000 Emergency patients are admitted every day. The Health Care Facilities(HCF) does not have valid authorization and the hospital has applied for consent under air/water Acts. Sources of BMW generation identified are wards, lab, OT, ICU, etc. About 270 kg/day of yellow category waste and 326 kg/day red category waste are generated and collected in colour coded bins. The quantity of general solid waste collected separately is not assessed and is dumped in a dhalao common for LNJP & GB Pant hospitals, which is later lifted directly by the municipality. The blue categories of wastes like needles, sharps, etc. are destroyed in a special room with sharp bluster and wastes sent for disposal. The segregation and collection of BMW was largely found in order. A temporary storage room is available within the premises, from where the authorized agent (SMS Pvt. Ltd.) transports the waste to the common treatment /disposal facility. Closed trolleys are available for transferring wastes from various wards/OT etc. Liquid waste is generated from laundry unit, kitchen, pathological lab, etc. The kitchen also generates general solid waste, which are collected without any segregation. There are two STPs for treatment of liquid waste with capacity of 1200 KLD and 600 KLD respectively based on Activated sludge process followed by activated carbon & sand filters. The STP of 600 KLD was found under shut down. As per the lab test report for treated effluent quality, the outlet BOD was 30 mg/l against the inlet BOD of 48mg/L, which was questionable. There is no provision to recycle the treated water, which at present is let out in common sewer. NoC from DPCC was not available. Out of two autoclaves, only one is in operational condition.

Recommendations:

- (i) Trolleys should be provided for transfer of BMW to storage area.
- (ii) General solid waste collection system needs to be improved by placing separate bins and maintaining records.
- (iii) The quantity of liquid waste generation has not been assessed. Provision may be made to treat entire wastewater and the treated water be recycled for ensuring zero discharge.
- (iv) The temporary waste storage facility required to be maintained hygienic.
- (v) Waste collection bins needs replacement with more numbers.
- (vi) Waste management cell needs to be strengthened;
- (vii) The waste management staffs to be provided with protective gears.

- (viii) Training protocols to be created and followed more rigorously for doctors, nurses & waste management staff and STP operators.

2. NEW DELHI RAILWAY STATION

The New Delhi Railway Station is one of the biggest Railway stations in the country with 16 Nos. of platforms. The daily passenger flow through this station is over one lakh. The waste collection within the platform is taken care of by the Health Department. Regular sweeping is observed at the platform area both manually and mechanically. The wastes collected at the Station, consists of 60% wet waste and 40% dry wastes. Public notices on collection of fines for littering were displayed on the platforms which also led to a collection of Rs. 3 crore last year as fine. However, public awareness in this context seems limited.

Chintan, an NGO, has set up a Material Recovery Facility (MRF) in the station premises, where the MSW is brought after collection. water bottles (PET) & metal wastes are sorted for recovering recyclable/ PET materials. Around 80 persons, largely rag-pickers, are engaged part-time in the unit. Daily waste collection of recyclable material is assessed to be 1400 kgs (8000metric ton/month).

The NGO also processes organic waste through aerobic composting (10 kg/day) and pit composting (28 Nos.). Foul smell was experienced in the surrounding of pit composting units. The compost is provided free of cost to Railways. The cost recovery and sustenance of NGO is through selling of scrap & pet materials together with some CSR support from other corporate.

The liquid waste from mechanised washing of tracks, laundry units (45 no.) and from toilets goes through individual sewer lines to trunk sewer. No on-site STP available at present. Railways have started installing bio-toilets and the task stands completed for 14,000 trains. A 100% conversion of toilets is targeted for 2019.

Recommendations:

- (i) Source segregation facility to be provided for wet waste and dry wastes.
- (ii) Waste collection records to be maintained.
- (iii) Material recovery facility to be modernized
- (iv) Pit composting needs to be operated hygienic way; odour suppression steps required.
- (v) Non-recyclable dry waste needs proper disposal.
- (vi) On-site STP facility to be installed.
- (vii) Awareness campaigns to be more frequent.
- (viii) Waste management cell needs to be established for proper coordination,

B. CIVIL LINE ZONE : Inspection date: 07.02.2017

3. Hindu College (DU), Delhi

This is a Trust run College, established in February, 1899. Hostel facility exists with 119 rooms. Total 225 students live with average occupancy 227. Kitchen within 20 X 11 Sq. ft. Waste management cell does not exist. The quantity of waste generation estimated to be 241kg/day (60kg/day from kitchen, 45kg/day from rooms, 10kg/day from littering and sanitary waste -1 kg/day, other 120 kg/day and 5kg/day from horticulture, which is being composted. Twin bin system placed at corridors but without any instructions on type of waste disposal. A collection of nearly 5kg/day of cardboard is taken by recyclers. Trolley used for un-segregated solid waste for temporary storage within premises and dhals for waste disposal which is then disposed off to landfills by north MCD. Frequency of collection is weekly. Wastewater is presently discharged into sewer line. A on-site STP of 500 KLD capacity is under construction. E-waste as informed, is disposed off through registered recyclers as per laid down procedure.

The college is availing services of Jagruti, an NGO, for recycling of used waste paper to get writing pads and invitation cards for college annual day function. Source of air pollution identified is Kitchen exhaust emission. Facilities provided are- 3.6 m exhaust from kitchen, fire safety, record maintaining, daily sweeping, etc.

Recommendations:

- (i) Waste management cell to be established
- (ii) ETP should be installed and recycle treated wastewater from horticulture & flushing.
- (iii) Start daily collection of wastes.
- (iv) Waste management needs improvement.

4. Maidens Hotel, 7, Shammath Marg, Delhi

It is five-star hotel, established in the year 1903. Total rooms available 55. EC obtained is valid till February, 2018. It has also obtained valid consents for air/water. Two kitchens, two restaurants, 55 rooms, sanitary waste lead to generation of 80KLD liquid waste & 60kg/day of horticultural waste. Solid wastes of nearly 100 kg/day is handled by a private agency and collected & disposed daily. Temporary storage facility exists for dry and wet garbage. Wastewater generated is treated through an STP of 500 KLD capacity with post treatment of activated carbon filter. The treated waste water is partly (60 m³/d) is recycled and rest discharged into city sewer. ETP sludge is composted and used as manure. The treated effluent quality is got tested through a private lab every 6 months. Sources of air pollution- DG set, Kitchen, Boilers having fume hoods, 18m stack.

Recommendations:

- (i) Waste management needs improvement.
- (ii) Arrange training for staffs
- (iii) Maintain zero discharge/zero waste.
- (iv) Testing of treated waste water frequency to be enhanced to at-least monthly.

5. HINDU RAO HOSPITAL & NDMC MEDICAL COLLEGE, MALKAGANJ:

It is a Government hospital established in the year 1958. It has average capacity-980 beds with 97 % occupancy. Patients visit OPD- 2000 per day, in-patients-150/day. Consent not renewed after 12.05.2009 and to be applied for after completion of ETP. Authorization has been applied on 10.06.2016. Annual report submitted. It has separate cell for BMW management with 8 persons. Units identified are- Wards, OT, Labs, OPD, etc. The quantity of waste generation estimated as – yellow- 112 kg/day, Red-NA, Blue 80kg/day, white- 10kg/day. Sharp materials broken and disposed off in tamper proof plastic containers. BMW transferred by closed trolleys and stored in temporary storage room away from patients wards. Facility provided for colour coded bins, source segregation, removal and disposal of BMW within 48 hrs, record maintaining, pre-treatment of BMW, training to staffs, etc. BMW waste is collected by M/s Yeshraj Biotechnology

On-site treatment facility for sewage and other liquid waste is under construction. Presently, the liquid waste including blood samples are discharged into common sewer after pre-treatment with hypochlorite. The General solid waste is collected without segregation and disposed off in dhalao, carried away later by MCD.

Recommendations:

- (i) STP should be installed and treated waste quality maintained
- (ii) To ensure for consent and authorization from DPCC/ CPCB.
- (iii) On-site Pre-treatment of BMW to be ensured from labs & OT also.
- (iv) Segregation of General solid waste to be followed as per latest rules.
- (v) Arrange regular training for staffs

6. SIGNATURE VIEW APARTMENT, RESIDENTIAL SOCIETY, DR. MUKHERJEE NAGAR.

The housing society has 336 flats within an area of 1000 sq.ft. with a total occupancy of 250 flats. Separate staffs exist for housekeeping and waste management. Source segregation is done at household level. Waste transferred daily by trolleys and disposed at nearby dhalao from where it is carried away by MCD. Sewage from individual household connected to common sewer and then trunk sewer. RWA is in planning for installing composting facility for organic waste of the society.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Arrange on-site composting of organic wastes/horticultural wastes
- (iii) Prohibit garbage throwing/littering in the premises

(iv) Maintain records of wastes

7. TIRATH RAM SHAH HOSPITAL, 2A, RBL, ISHOR DAS SWAHNEY MARG, RAJPURA ROAD, DELHI 54

The hospital, a private hospital, was established in May, 1955. Total capacity-200 beds with 70% occupancy. OPD caters to 300-400 patients/day. It has got valid consents and authorisation. Annual reports submitted. It has separate waste management cell. Units identified are Wards, ICU, casualty, Dialysis, OT, etc. The quantity of BMW generation assessed is Yellow- 6kg/day, Red- 5 kg/day, Blue 3kg/day. ETP exists and also given pre-treatment to wastes of microbial waste, lab waste, etc. with chemical disinfectants. Wastewater generation estimated as 70KLD. The treated wastewater is discharged to city sewer and land irrigation. ETP sludge disposed in CBMWTF. Cytotoxins waste is stored safely and returned to manufacturer or disposed in CBMWTF. Facility provided for colour coded bins, source segregation, removal and disposal of BMW within 48 hrs, maintaining records of waste, training to staffs, etc.

Recommendations:

- (i) Implement BMW rules, 2016 in r/o transporting & storage of waste in hospital premises.
- (ii) Implement Bar code systems
- (iii) Upload information on web site.

C. ROHINI ZONE: Inspection Date: 07.02.2017

8. SHRIKIRSHNA APARTMENT, J-BLOCK, SECTOR 16, ROHINI

It is private residential apartment, established in May, 2005. The area of the premises is 1100 sqm, encompasses 310 flats by 800 people. Total quantity of solid waste generation is assessed as 240 kg/day. No segregation is practiced at household level, no facility for composting and on-site storage. Wastes are being disposed in dhalaos. ETP/STP does not exist, wastewater directly discharged into city sewer. One DG set is observed in the premises with exhaust duct.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

9. NAGIN LAKE APARTMENT, PEERAGARHI, DELHI

It is a DDA flat apartment constructed during 1998 within an area of 48,564 sqm. It houses 325 flats and 1200 people live here. EC doesn't apply. Separate staffs engaged for solid waste management. The quantity of waste generation is estimated to be 360kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported to the dhalaos for disposal. Wastewater is discharged into city sewer line.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

10. EKTA ENCLAVE, PEERAGARHI, DELHI

It is a DDA flat apartment constructed during 1991 within an area of 32,396 sqm. It houses 410 flats and 1300 people live here. EC does not apply. Separate staffs engaged for solid waste management. The quantity of waste generation is estimated to be 390kg/day. Single-bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported to the dhalaos for disposal. Waste transporting trolley not adequate. Wastewater is discharged into city sewer line.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

11. JHANG SOCIETY, SECTOR 13, ROHINI, DELHI 85

It is a private built apartment constructed during 1999 within an area of 34,400sqm. It houses 490 flats and 2450 people live here. EC doesn't apply. Separate staffs engaged for solid waste management. The quantity of waste generation is estimated to be 850kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported to the dhalaos for disposal. Wastewater is discharged into city sewer line.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation & on-site composting
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

12. DELHI CITIZEN SOCIETY, PLOT NO. 24, SECTOR-13, ROHINI, DELHI-85

It is a private built apartment constructed during April, 1989 within an area of 19,932 sqm. It houses 300 flats and 1500 people live here. EC doesn't apply. Separate staffs engaged for solid waste management. The quantity of waste generation is estimated to be 450kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported to the dhalaos for disposal. Wastewater is discharged into city sewer line. One DG set available.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation & on-site composting
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

13. BHARAT APARTMENT, PLOT NO. 20, SECTOR-13, ROHINI, DELHI 85

It is a private built apartment constructed during October, 1994 within an area of 20,512 sqm. It houses 308 flats and 1540 people live here. EC doesn't apply. Separate staffs engaged for solid waste management. The quantity of waste generation is estimated to be 462kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported by trolleys to the dhalaos for disposal. Wastewater is discharged into city sewer line. One DG set available.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation & on-site composting
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes
- (vi)

14.DELHI TECHNOLOGICAL UNIVERSITY, SHAHBADDAULATPUR, DELHI

i) It is a Delhi Government college with Hostels located at Shahbadm Daulatpur, established in the year 1996. The area of premises is 50,607 sq.m.. Total 1012 rooms are available in hostels and 1655 students live here. There are five kitchens for students. EC obtained and consent status not informed. The quantity of solid waste generation is 5085 kg/day. Mixed garbage is collected in single bins though blue and green coloured bins are placed in the campus. Facility is not available for segregation, storage and treatment. Trolley is used for transporting the waste and disposal at dhalaos. Kitchen waste is brought to a biogas facility for generation of methane for use in college canteen and generation of manure for gardening. The plant was however not operational at the time of visit and no proper documentation of the quantity of waste being generated and disposal of the same.

Wastewater generated is directly discharged into city sewer line. There was no proper documentation of the waste/sewage being generated /treated. There was a sewage treatment plant in the past within the premises. But the same has been scrapped in the past and no sewage treatment plant is available currently. Air pollution sources identified are 5 kitchens.

- (i) Implement source segregation
- (ii) Install ETP and recycle wastewater and minimise water consumption
- (iii) Prohibit garbage throwing/littering in the premises
- (iv) Maintain records of wastes

Recommendations:

- i) Create awareness among students for segregation and collection
- ii) The management may ensure proper functioning of the bio-gas plant and other treatment procedures be employed for processing the organic waste within the campus as per Solid Waste Management Rules, 2016.
- iii) Proper segregation of the solid waste be done before disposing the same.
- iv) Proper documentation be maintained regarding the waste generated in different streams and the wastewater generated and disposed off.
- v) An STP with suitable technology be set up at the campus itself for treating the wastewater generated and the treated wastewater shall be used for gardening/horticulture within the campus as far as possible.

(i) NARELA ZONE : Inspection date: 08.02.2017

15.NARELA RAILWAY STATION:

It is located Northern border of Delhi, connects Railways to Punjab, Chandigarh, Himachal Pradesh and J&K. It is an old railway station with two platforms within

1000 sq.m. area. Around 200 trains pass daily through this station. Around 1100 passengers travels daily through the station. It is a D-Category station and collects Rs. 1.0 Crore revenue annually. Valid consent obtained under water and Air Acts. Cleanliness maintained by engaging part time staffs (Two sweepers). Common dust bin provided but segregation of waste is not practiced. The collected waste is handed over to municipality for disposal. Around 100 kgs of solid waste generated daily from residential colonies, station yards, office room and horticulture; 10 kg waste generated in station yards. Temporary waste storage located within premises. Record maintained for waste collections. Station yard maintained cleanliness, no littering observed.

Residential colonies are observed on the opposite side of the station. Solid waste accumulated in between two railway tracks in the vacant plots. Sewage generated from the station is connected to Municipality sewer line.

Observations:

- i) Solid waste is being dumped outside the platform area but within the Railway premises.
- ii) Neither two bin system nor segregation of waste is being followed even though two coloured bins are already provided separately in the platforms.

Recommendations:

- i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.
- ii) Dumping of waste in the Railways land should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the MCD employees.

16.SATYABADI RAJA HARISHCHANDRA HOSPITAL, NARELA:

The Hospital is owned by Delhi Government, established in the year 2003 within an area of 26,630 sq.m. It has capacity of 200 beds with 40-50% occupancy. Around 2000- 3000 outdoor patients visit daily and 70-100 in patients admitted every day. It has obtained EC and consents under water/air Acts and valid authorization. Annual report submitted every year. Separate BMW management cell exists. Units identified are- Wards, lab, casualty, labour room, OT, OPD, etc. Separate waste collection bins are placed in wards (black, red & yellow). Two autoclaves are operational for treating infectious wastes. Sharps/needles are destroyed and stored in white containers. Waste storage facility available outside the wards; from where, an authorized agent (Biotech) collect the wastes for treatment and disposal. The quantity of BMW generation is assessed as yellow- 20-50 kg/day, Red- 15-30 kg/day, Blue -5-10 kg/day and white- upto 500 gm/day. The waste is removed from wards in every shift.

ETP (MBR) of 300 KLD capacity is operational for treating of wastewater. The ETP components are Collection tank, Aeration tank, MBR, Ultra Filtration tank, sludge collection and disposal at CBMWTF. The quantity of wastewater is 120 KLD. The treated water is re-used for gardening/horticulture (80%) and 20% discharged through open drains.

There are residential staff quarters (95 flats) within 6500 sq. m. which encompasses DG sets, Kitchen, Boilers with 30 m stack height.

Observations:

- i) No pre treatment of infectious wastewater was observed.
- ii) No secondary sedimentation tank was in place.
- iii) Solid waste is being handed over to a private waste collector. However, Hospital Management is not aware of the disposal procedures of the same.
- iv) No proper documentation of the quantity of sewage/solid waste generated is being maintained by the hospital management.
- v) No provision for treatment of sludge is done.

Recommendations:

- i) Pre treatment of infectious wastewater shall be done properly as per Bio Medical Waste (Management and Handling) Rules, 2016.
- ii) The existing STP's function shall be monitored for adequacy and efficiency. The same shall be submitted by the hospital management to the Hon'ble NGT.
- iii) Proper records/documentation shall be maintained on the waste (Solid & Liquid) generation and disposal procedures.
- iv) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.

17.RESIDENTIAL SOCIETY, SECTOR-A5, POCKET 6, POLICE COLONY, NARELA (DDA)

The DDA residential colony was established in 1983. Total 651 flats constructed within 10,000 sq.m. area. Around 2000 people live in the society and generate 550 kg/day of solid waste; which is collected by MCD tipper trucks. No segregation of waste is observed at source. One Dhalao exists nearby entrance road in an unattended manner. Wastes found accumulated in the drains and DDA parks. There has been confusion over the ownership of the Dhalao for maintenance. Around 50 lit/house/day wastewater is generated. The untreated wastewater is discharged through open drains.

Observations:

- i) No segregation of waste into three separate streams at the source is being followed even though Rs. 50 per household is being charged by the private contractor for the collection of waste from the households.
- ii) The mixed waste collected in the premises is being dumped in the nearby dhalao.
- iii) Traces of solid waste dumping on the sides of the roads and in the park near by the dhalao were observed even though the waste lying there where cleaned just before the committee's visit. Further, the dumping was also observed in the surrounding drains.
- iv) No existing sewage treatment plant for the premises.

Recommendations:

- i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately.
- ii) Awareness to be created among households for segregation and prevent throwing of garbage in public places.
- iii) Fine shall be levied by the MCD on the defaulting households.
- iv) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible.
- v) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh Bharat Mission.
- vi) Dhalao shall be covered and gates shall be provided for preventing the unauthorized dumping of waste by the private contractors or the residents of the community.
- vii) Unauthorized dumping of waste around the dhalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.
- viii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified on daily basis and proper records shall be maintained by the RWA.

(ii) ROHINI ZONE: 08.02.2017

18.D-MALL, SECTOR 10, ROHINI

It is private owned Shopping centre, established in July, 2010. Total area of the premises is 4000 sq. m. Encompasses 22 Nos. Shops. EC obtained and have valid Consents for Air and water. Waste generation identified from 04 kitchens, 03 Restaurants, and 22 shops. Public litter bins placed 12 nos. (two bins system) for collecting around 105 kg of solid waste every day. No treatment facility is

available. Wastes are being disposed at dhalaos. Trolley used for transferring the waste. Wastewater generated from kitchen discharged into city sewer. ETP installed and recycled treated water for irrigation and toilet flushing. Air pollution sources identified are - 2 DG sets and kitchen emissions.

Recommendations:

- (i) Create awareness among staffs for segregation and collection
- (ii) Implement source segregation and provide user friendly facilities
- (iii) minimise water consumption and maintain zero discharge
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

19. CITY CENTRE MALL, SECTOR-10, ROHINI

It is a private Mall, established in August, 2010 within an area of 6772 sq.m. The mall encompasses 79 shops. EC obtained for the premises and has valid consents. Separate staffs engaged for waste management. Sources of waste generation identified are kitchens -2 Nos., Restaurants -2 Nos., shops -79 Nos. including sweeping wastes, sanitary wastes, horticultural wastes. Public litter bins (twin) are provided at 10 locations. Around 800 kg/day solid waste is generated from the Mall; no treatment facility is available. The waste collected directly transferred by trolley to dhalaos for disposal. Wastewater generated from kitchen, ETP installed and recycled treated water for horticulture and flushing. STP not installed and discharge into city sewer. Air pollution sources identified are 3 DG sets and kitchen ducts.

Recommendations:

- (i) Create awareness among staffs for segregation and collection
- (ii) Implement source segregation
- (iii) minimise water consumption & maintain zero discharge
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

20. UNITY MALL, SECTOR-10, ROHINI

It is a private owned mall adjacent to multi-level parking facility of DMRC at sector 10, Rohini. It was established in June, 2016 within an area of 10000 sqm, housing 31 shops. EC obtained and has valid consents from DPCC. Sources of waste generation identified are- kitchen, restaurants, shops, etc. Total 102 kg/day of solid waste is generated, which are collected in public litter bins 12 nos (two bins system). Wastes are transferred by trolleys to the dhalaos. Wastewater generated from kitchens and treated in ETP. Treated wastewater used in

horticulture and flushing. STP does not exist and connected to sewer line. Sources of air pollutions are 3 Nos. DG sets and Kitchen ducts.

Recommendations:

- (i) Create awareness among staffs for segregation and collection
- (ii) Implement source segregation
- (iii) minimise water consumption & maintain zero discharge
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

21. GHALIB MEMORIAL COOPERATIVE GP HOUSING SOCIETY PVT. LTD., NEAR PUSHPANJALI ENCLAVE, DELHI: 34

It is a private built apartment constructed during July, 1988 within an area of 21,044 sqm. It houses 300 flats and 1500 people live here. EC obtained and applied for consents. Part-time staffs engaged for SWM. The quantity of waste generation is estimated to be 450kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported by cycle-rikshaw to the dhalaos for disposal. Wastewater is discharged into city sewer line. ETP is not available.

RECOMMENDATIONS:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation & on-site composting
- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

22. JAWAHARLAL NEHRU CO-OPERATIVE GP HOUSING SOCIETY (VIDYAVIHAR), PLOT NO. 5, WEST ENCLAVE, PITAMPURA

It is a private built apartment constructed during July, 1991 within an area of 5 acre. It houses 300 flats and 1600 people live here. Consent does not apply. Part-time staffs (7 nos.) engaged for SWM. The quantity of waste generation is estimated to be 480kg/day. Single bin collection system exists, no segregation, treatment and on-site storage facility. The waste collected is transported by cycle-rikshaw to the dhalaos for disposal. Wastewater is discharged into city sewer line. ETP is not available.

Recommendations:

- (i) Create awareness among residents for segregation and collection
- (ii) Implement source segregation & on-site composting

- (iii) Install ETP and recycle wastewater and minimise water consumption
- (iv) Prohibit garbage throwing/littering in the premises
- (v) Maintain records of wastes

(i) ROHINI ZONE: DAY-1 VISIT ON 09.02.2017

23. RAJEEV GANDHI CANCER INSTITUTE AND RESEARCH CENTRE, SECTOR-5, ROHINI, DELHI 85

It is a private hospital, established in July, 1996. Total capacity of 302 beds with 85% occupancy. OPD- 400 per shift and in-patient- 250/day. EC obtained and also have valid consents and authorization. Annual report submitted and have separate BMW cell to manage BMW. Units identified are- OT, ICU, Lab, OPD, etc. The quantity of BMW generation assessed; Yellow- 90kg/d, Red- 70kg/d, Blue 12kg/d & white- 29kg/d. Wastes removed from wards through covered trolleys and stored at temporary storage away from patients. Wastes disposed through CBMWTF through authorised agents. There is no ETP and proposed for construction. Wastewater generation 120 KLD disposed through sewer line. On-site pre-treatment given to BMW, spore test not conducted. Facility provided for colour coded bins, source segregation, removal of waste and disposal within 48 hrs.

Observations:

- i) Solid waste is being collected separately and given to the private contractor and no proper knowledge with staff members about the disposal of the same.
- ii) SBR Technology is being used for the treatment of mixed sewage. However, the quality of the sewage before and after treatment was not documented properly.
- iii) No provision for treatment of sludge is done.

Recommendations:

- i) Pre treatment of infectious wastewater shall be done properly as per Bio Medical Waste (Management and Handling) Rules, 2016.
- ii) The existing STP's function shall be monitored for adequacy and efficiency. The same shall be submitted by the hospital management to the Hon'ble NGT.
- iii) Proper documentation shall be maintained on the waste (Solid & Liquid) generation and disposal procedures.
- iv) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.

24.AMBIANCE MALL,, SECTOR 10, ROHINI

Ambience Mall is located at 2B2, Twin District Centre Sector 10 of Rohini. It was established in October, 2014 within the premises of 4,50,000 Sq.Ft. The mall has valid consents under water and air act. Housekeeping is maintained by separate staffs. It has placed 10 liter bins (twins) and estimated waste collection is around 1000 kg/day, most of them are cartons. The waste is transferred by trolley and disposed at dhalaos. STP does not exist, wastewater discharged into sewer line. Sources of air pollution identified are 2 Nos. DG sets. Wastewater treated in ETP (150KLD) and recycled for flushing and horticulture.

Observations:

- i) The solid waste is being generated in Big Bazaar shopping centre and is being dumped into the dhalao by the private contractor and management is not aware of the disposal process.
- ii) ETP of 150 KLD with MBR and ASP technology is in operation. Another plant is also under proposal.
- iii) Zero discharge is being maintained by the mall management in regard to the sewage.
- iv) No proper documentation of the waste generation and treatment is available.

Recommendations:

- i) Big Bazaar management shall ensure treating the waste within the mall premises itself as far as possible as they are coming under the category of bulk generators as per the Solid Waste Management Rules, 2016. In case the same is not viable, then the management shall establish a centralized treatment facility integrating various branches of the management for the treatment of organic waste.
- ii) The proper record on the same shall be maintained by the management.

25.CROWN PLAZA, ROHINI

Observations:

- i) Out of 450Kg/day of organic waste generated, only 50kg/day is being composed using OWC technology. However, the rest being given to the private contractor to transport the same to deliver this to the Goshalas.
- ii) A STP of capacity 260cum and an ETP of 100cum is in operation. Both are working with extended aeration process. The ETP is having arrangements for separating oil from the waste water.
- iii) Proper documentation on the quantity of compost being generated is not maintained by the management.

Recommendations:

- i) The mall management shall setup additional treatment facility for the excess waste generated as the current practice of disposal has serious gaps in proper management of solid waste.
- ii) The management shall maintain a proper record of the quantity of the compost being generated on daily basis

(ii) VISIT TO ROHINI ZONE (DAY 2) ON 10-2-2017**26.DTC-BUS DEPOT,ROHINI SECTOR 3**

The DTC Bus depot at Rohini Sector-3 was established in December 1989. Total 123 Buses stationed here and transport average 35,500 passengers every day. The station is area covers 28,132 sq.m and built up area is 1,711 Sq.m. Valid consent obtained under Water Act. Cleanliness maintained through contractual workers. Sources of waste generation are canteen, public bins (8 Nos.), Automatic Washing unit, floor sweeping, etc. Wastewater generated from canteen is released to open site of MCD (storm drain). Estimated wastewater generation is 10 KLD and no treatment facility is available for wastewater. Sanitary waste and horticultural waste disposed at open site. Segregation of waste not followed. No facility for temporary storage of wastes. Sources of air pollution observed are DG set and Kitchen emission.

Observations:

- i) About 250 employees working in the service area excluding the transportation staffs.
- ii) Solid waste is being collected and dumped into the nearby dhalao without any segregation and treatment.
- iii) Recycled water of 12000 L/day is being supplied by DJB for washing the buses.
- iv) No treatment is employed to the used wash waters and discharged into the sewerage networks.
- v) No proper maintenance of the records for waste generation and disposal.

Recommendations:

- i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- ii) Proper pre-treatment shall be given to the wash water before letting into the MCD sewers.

- iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities.
- iv) Proper training shall be given to all the employees about the management of solid waste and best practices.

27.NEELKANTH APARTMENTS, ROHINI, SECTOR 13, DELHI:

85

It is private Residential apartment, built in the year 1998. The size of the premises is 23,664 sq. m. Total 346 flats are available for living 1650 people. DG set observed 3 nos. and Kitchen emission in one unit. The quantity of solid waste generation is estimated as 495 kg/day. Wastes are collected in single bins without source segregation and transferred with pull cart. No temporary storage facility. Spillage of waste/ water not observed.

Observaions:

- i) Total apartments – 346 nos.
- ii) Total apartments occupied – 330 nos.
- iii) Water usage – Around 2.0 Lakh Liters/day
- iv) Source of water - DJB
- v) Solid waste is being collected and dumped into the nearby dhalao without any segregation and treatment.
- vi) Sewage generated is being discharged into the sewerage networks without any treatment.
- vii) No proper maintenance of the records for waste generation and disposal.

Recommendations:

- i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately.
- ii) Fine shall be levied by the MCD on the defaulting households.
- iii) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible.
- iv) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh Bharat Mission.
- v) Dalao shall be provided with gates for preventing the unauthorized dumping of waste by the private contractors or the residents of the community.
- vi) Unauthorized dumping of waste around the dalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.

- vii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified on daily basis and proper records shall be maintained by the RWA.

28. PRINTER SOCIETY, PLOT NO 18, SECTOR 13, ROHINI

The private residential society was established in June, 1996 within an area of 34,600 sq.m. Total 438 Flats available to live in 2000 people. Total quantity of solid waste generation is estimated as 600 kg/day. No segregation and treatment process is adopted in the premises. The entire waste is disposed at MCD dhalaos. Sources of air pollution identified in 3 DG sets.

Observations:

- i) Total apartments occupied– 438 nos.
- ii) Source of water – DJB & ground water
- iii) Solid waste is being collected and dumped into the nearby dalao without any segregation and treatment by the private collector.
- iv) Sewage generated is being discharged into the sewerage networks without any treatment.
- v) No proper maintenance of the records for waste generation and disposal.

Recommendations:

- i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately.
- ii) Fine shall be levied by the MCD on the defaulting households.
- iii) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible.
- iv) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh Bharat Mission.
- v) Dalao shall be provided with gates for preventing the unauthorized dumping of waste by the private contractors or the residents of the community.
- vi) Unauthorized dumping of waste around the dalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.
- vii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified daily basis and proper records shall be maintained by the RWA.

29.FORTIS HOSPITAL, AB BLOCK, SHALIMAR BAGH, NEW DELHI: 88

It is a private Hospital with 262 beds capacity and 67% bed occupancy. Daily out door patients visit around 280 and in patient average 35 /day. The hospital has obtained valid consent under water and air acts and also authorization for BMW management. Units present- OT, ICU, Cath-Lab, Dialysis, Labour room, PathLab, Endoscopy, procedure, emergency, general ward and blood bank. The quantity of MW generation assessed as yellow- 74 kg/day, Red- 139 kg/day, Blue- 37 kg/day & white- 14.3 kg/day. BMW collected is transferred with closed trolleys and kept in a temporary storage away from the patient wards. No ETP is available. Pre-treatment provided to infectious wastes by chemical disinfection. Spore test conducts regularly followed by autoclaving. Wastewater generation is approx 153 KLD. Facilities available are colour coded bins/bags, segregation, removing waste within 48 hrs, pre-treatment, authorized vendor for waste disposal, record maintenance, training to staffs, etc.

Observations:

- i) Solid waste is being collected and given to the private contractor for disposal. However, there is no proper record regarding the quantity of waste generated and its disposal is being maintained by the hospital management.
- ii) STP of 300 KLD with SAFF reactor technology along with MGF, ACF and softening is being employed to treat the wastewater generated.
- iii) Pre-treatment of the infectious wastewater is being done.
- iv) No test report is available to determine the quality of inlet wastewater.
- v) No sludge treatment is being employed, as of now even, though filter press is installed for dewatering the sludge.
- vi) Sharp smell was felt during the site visit which may have the impact on the health of the operators.

Recommendations:

- i) The existing STP's function shall be monitored for adequacy and efficiency. The same shall be submitted by the hospital management to the hon'ble NGT.
- ii) Proper documentation shall be maintained on the waste (Solid & Liquid) generation and disposal procedures.
- iii) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.
- iv) Proper ventilation shall be provided in the STP area to prevent the development of anaerobic condition in the STP and to reduce the odour.

30.ESI HOSPITAL, SEC-15, ROHINI, DELHI-89

It is a Government Hospital established in the year 1999. Total bed capacity is 300 with average occupancy 54%. Average outdoor patients- 1760 and in-patient 179 (60%)/day. EC obtained along with consent and authorization. Annual report submitted. Separate BMW cell exists. Units- Wards, OPD, OT, Nursery, Casualty, Lab, Labour Room. BMW assessed- yellow- 65 kg, red- 40 kg, blue- 10 kg & white- 14 kg/day. Wastes transferred from wards by closed trolleys and stored at separate storage room.

ETP does not exist, only pre-treatment of wastes with chemical disinfection, autoclaving and spore test conducts regularly. Waste disposed through registered recyclers. Facilities available are colour coded bins, segregation, waste removed before 48 hrs, record maintained and provides training to staffs.

Recommendations:

- (i) Install ETP for treating wastewater
- (ii) Implement BMW rules, 2016
- (iii) Organize regular training to new staffs
- (iv) Implement bar code system
- (v) Upload information on website

31.MAX SUPER SPECIALITY HOSPITALS, FC-50, C&D BLOCK, SHALIMAR BAGH, NEW DELHI: 88

It is a private hospital established in the year 2011. Total bed capacity is 250 and average occupancy 70%. OPD – 386 and IDP- 205. It has obtained EC and also posses valid consent and authorization. Annual reports are submitted. Units identified are- Wards, OT, OPD. Waste generation- yellow: 207 kg, red- 213 kg, blue – 96 kg & white 49 kg/day. BMW removed/transferred by covered trolleys and stored at temporary storage. It practices pre-treatment with chemical and autoclaving. Spore test also conducted to see the efficacy of disinfection. ETP provided of capacity 12.5 KLD. Treated wastewater is discharged on land for horticulture and flushing in water closets.

Recommendations:

- (i) Implement BMW rules, 2016
- (ii) Organize regular training to new staffs
- (iii) Implement bar code system
- (iv) Upload information on website

32.BABA SAHEBAMBEDKAR HOSPITAL, SECTOR-6, ROHINI, DELHI: 110085

This is a Government hospital established in the year 1999. The total capacity is 500 beds. The average no. of patients visit OPD are about 5069/day and the average in-patients are about 176/day. Vaild consent has been obtained and

authorisation under BMW Rules has been applied for. Annual Reports are being submitted. Separate BMW cell exists. The average quantity of BMW generation is Yellow- 75kg/day, Red- 100 kg/day, Blue 15 kg/day & White 4 kg/day. BMW removes with closed trolleys and stored temporarily away from patient areas. On-site treatment of BMW provided with autoclaving. Autoclaved and shredded BMW handed over to authorised recyclers. ETP provided for treating wastewater of 200KLD (SBR technology). The treated effluents are used for horticulture & toilet flushing. On-site pre-treatment is given to laboratory wastes with chemical disinfectants. Spore test is also conducted regularly to ensure disinfection. Facilities provided for colour coded bins, source segregation, BMW disposed before 48 hrs, record maintaining, pre-treatment, training to staffs, etc.

Recommendations:

- (i) Bar coding of BMW bags shall be followed.
- (ii) Uploading BMW information on website shall be done.
- (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done.
- (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures.
- (v) Hospital employees shall be made aware of the process of treatment of solid waste & sludge generated from the ETP and their disposal methods.

33.SAROJ SUPER SPECIALITY HOSPITAL, INSTITUTIONAL AREA, SECTOR -14 EXT. MADHUBANCHOWK, ROHINI, DELHI: 110085

The hospital was established in December, 1997 and is owned by Trust. The total no. of beds available are 154 with an average occupancy 85% occupancy. The average no. of patients visit OPD are about 500/day and in-patients are about 125/day. It has obtained valid consent and authorization from SPCC. Annual Reports are not being submitted to SPCC. Separate BMW cell exists with 200 staffs. Units identified are- ICU, PICU, NICU, CTVS, OT & ICU, LICU, Lab, OPD, OT, LR, Nursery, etc. The quantity of BMW generation is about 113 kg/d (i.e., Yellow- 30kg/day, Red- 65kg/day, Blue- 10 kg/day & white- 8kg/day). BMW is removed from wards by closed trolleys and stored separately away from patients. ETP is provided to treat 35KLD wastewater. Treated water is discharged into sewer line. Pre-treatment is given to BMW laboratory wastes and chemical disinfectants. ETP sludge disposed at CBMWFT through authorised agent. Facilities provided for colour coded bins, source segregation, removing waste within 48 hrs, maintaining records, pre-treatment, training to staffs and disposal within 48 hrs.

Recommendations:

- (i) Bar coding of BMW bags shall be followed.
- (ii) Uploading BMW information on website shall be done, if not done already.
- (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done.
- (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures.
- (v) Hospital employees shall be made aware of the process of treatment of solid waste & sludge generated from the ETP and their disposal methods.

34. SHRI BALAJI ACTION MEDICAL INSTITUTE, FC-34, A-4, PASCHIMVIHAR, NEW DELHI- 110063

The hospital was established in April, 2005 and is owned by Trust. It has a total of 250 beds. In an average the no. of patients visits the OPD is about 683/day & the average in-patients are about 241/day. It has valid consent and applied for authorization. Annual report is submitted. Separate BMW cell exists. Units identified are- OT, OPD, Dialysis, Wards, LR, Blood Bank and pathlab. The quantity of BMW generation assessed as; Yellow- 53kg/d, Red 112 kg/d, Blue 98 kg/d & white- 11kg/d. ETP provided (STP). On-site pre-treatment for microbiology, lab wastes, bloods, etc. autoclave operational, Spore test conducts regularly. Wastewater generation estimated to be 1.52 KLD (STP). Treated wastewater disposed on land and toilet flushing. ETP sludge is used as manure. Facilities provided are –colour coded bins, source segregation, removal of BMW within 48 hrs, pre-treatment to BMW, collection of BMW by operator, training to staffs, record maintaining, etc.

Recommendations:

- (i) Bar coding of BMW bags shall be followed.
- (ii) Uploading BMW information on website shall be done, if not done already.
- (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done.
- (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures.
- (v) ETP sludge shall be adequately treated before using in gardening.
- (vi) Hospital employees shall be made aware of the process of treatment of solid waste and its methods of disposal.

35. JAIPUR GOLDEN HOSPITAL, 2, INSTITUTIONAL AREA, SECTOR-3, ROHINI, DELHI: 110053

The hospital was established in February, 1991 and is owned by Trust. Total capacity of 242 beds with an average occupancy of 52%. average the no. of

patients visits the OPD are about 315/day. It has obtained valid consents and authorization. Separate BMW cell does not exist. Units identified are- General Wards, LR, Nursery, OT, PICU, SICU, MICU, Dialysis, CCU. The average quantity of BMW generation is 177 kg/d (i.e., Yellow- 49kg/d, Red- 95kg/d, Blue 26kg/d & white- 7 kg/d). ETP does not exist. Pre-treatment is given to lab wastes, microbiological wastes,etc. with chemical disinfectants, autoclaving followed by shredders. Facilities provided for colour coded bins, source segregation of waste, removing wastes, record maintaining, removing and disposal of waste within 48 hrs.

Recommendations:

- (i) Bar coding of BMW bags shall be followed.
- (ii) Uploading BMW information on website shall be done, if not done already.
- (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done.
- (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures.
- (v) ETP of adequate capacity shall be installed at the earliest for treating the wastewater generated in the hospital.
- (vi) Proper pre-treatment in accordance to the BMW Rules, 2016 shall be given to the infectious wastewater before treating/disposing the same.
- (vii) Hospital employees shall be made aware of the process of treatment of solid waste and its methods of disposal.

A. KAROLBAGH ZONE: VISIT ON 13.02.2017

36.SARAI ROHILA RAILWAY STATION

(i) It is an A-category Station with around 30,000 passengers travels daily. 34 mails and 9 passengers passes through this station daily. Platform length is 525m. Only 12 dust bins available each in platform nos. 1, 2&3 and 4&5 with 4 in each. No two bin system is being followed. No segregation of waste was observed. Station cleaning is outsourced. The collected wastes are dumped in the nearby dalaos. Public notice was displayed against littering in the platform. Penalty for littering is from Rs. 500/- to Rs. 5000/-. However, lesser fines were collected from the defaulters in the past. During the year 2016, 13 persons have been penalized total amounting Rs. 2700/- . No proper cleaning of tracks were observed. Rag pickers collects wastes from Railway tracks. No sewer line is available along the track to drain wastewater into the nearby MCD sewers.

Recommendation:

- (i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.
- (ii) Dumping of waste in the dalaos should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the MCD employees.
- (iii) Proper fines as per the guidelines shall be levied to the litterers.
- (iv) Sewer lines along the track shall be constructed and connected to the nearby MCD sewers for the collection and transportation of wastewater/soils generated in the rails.
- (v) Proper tools shall be used for removing the night soil from the tracks and manual scavenging shall be discouraged.

37.HOTEL JAYPEE SIDDHARTH, KAROL BAGH

The hotel has an average occupancy of 94 rooms in a day. Total solid waste generation is estimated as 500kg/day. Organic waste constitutes 20% of solid waste. The balance is dry waste, which is disposed through private party. The organic waste is being treated through OWC of capacity 500 kg/d. The compost produced is used for horticulture within the premises and in the sister concerns.

STP of total capacity 156 KLD is installed (i.e., for kitchen wastewater – 60 KLD with SBR technology and for general wastewater – 96 KLD with MBBR technology). Both the treatment plants have filtration, softening and disinfection as post treatment processes. Treated wastewater is used in horticulture, washing and cooling tower. Rainwater harvesting facility exists.

Recommendations:

- (i) The quality of compost shall be tested periodically in any certified labs and the records of the same shall be maintained properly.

38.BLK HOSPITAL

The hospital has 465 beds with an average occupancy rate of 275-280 beds per day. The total BMW generation per day is 350-100 kg. Blood bank wastes treated with autoclave and hypochloric acid. Blood/ fluids are treated with 10% hypochloric acid for 20 minutes retention. Register maintained for discarded blood bags. Waste collected from OT in black box, yellow and red. Sharp/needles collected in puncture proof containers, glass in blue covered containers. The sharps /needles are incinerated by M/s SMS at Nilothi Hospital under supervision.

Containers removed within 48 hrs and when 3/4th is full. Disposal of BMW is done through outsourced agent (SMS Waterage). Wastes are stored within premises, which are taken by the authorised agent for disposal. Bar coding yet to be implemented. Web updation is implemented. However, disposal of BMW is not observed by the hospital authority. Plastic and BMW not segregated. No segregation of non-infectious waste. Further, gloves and needle caps were observed in the bags of non-infectious waste. There were no records maintained on the quantity of solid waste generated.

Treated wastewater (BOD-16) is used in cooling towers and for horticulture purposes. ETP of 550 KLD (i.e., one 300 KLD and another 250 KLD) outsourced to RBN Enviro. Liquid waste from OT and laundry directly drained to ETP. The treatment units of ETP include FMR, filtration, softening and disinfection. The sludge generated is given to the BMW contractor for treatment and disposal. The management is not aware of the sludge disposal methods.

Recommendations:

- (i) Bar coding of BMW bags shall be followed.
- (ii) Proper documentation shall be maintained on the solid waste generation and disposal procedures.
- (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done and no infectious shall be allowed to mix with the general solid waste.
- (iv) Proper pre-treatment in accordance to the BMW Rules, 2016 shall be given to the OT wastewater before treating the same in ETP.
- (v) Hospital employees shall be made aware of the process of treatment of sludge generated from the ETP and its method of disposal.

39.DTC BUS DEPOT-II, SECTOR 16, ROHINI, DELHI

It is a DTC Bus Depot having 4 bays within an area of 20,236 sqm. About 90 buses arrived every day and carries 23,159 passengers every day. Applied for consents under water/air acts. Waste management cell does not exist. Waste generation sources identified are canteen (1), rooms (20), vehicle coach cleaning, floor sweeping, etc. About 35 kg/day solid waste generated from the Depot. Waste storage facility available in the premises and disposed into the dhalaos. No segregation is practiced; mixed solid waste placed in corridors. Waste transferred by trolleys. Wastewater generation is 0.5 KLD and connected to sewer line. ETP installed for treatment of wastewater and treated wastewater recycled (10KLD) for vehicle washing. ETP sludge composting is done. Sources of air pollution identified is DG set.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities.
- (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.

40.DTC BUS DEPOT, NANGLOI, CAMP NO, 4, JAWALAPURI, ROHTAK ROAD

The Bus Depot was established in December, 2010 within an area of 20,000sqm. Around 101 buses stationed in its 7 bays every day. Almost 17000 passengers travel through the depot. Waste generation sources identified are canteen, rooms (22), vehicle coach washing, floor sweeping, etc. About 44 kg/day solid waste generated; on-site storage facility is available. Separate staffs exist for waste management. No segregation practiced; mixed garbage transferred through trolleys and disposed at Dhalaos. Wastewater generated is discharged into city sewer. Air pollution source is DG set.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers.
- (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities.
- (iv) Proper training shall be given to all the employees about the management of solid waste and best practices.

41.DTC BUS DEPOT, PEERAGARHI, OUTER RING ROAD

It was established in 1989 within an area of 21,116 sqm. Daily 90 buses ply through the depot and carries around 15,000 passengers. Waste generation sources identified are canteen, rooms (25), vehicle coach washing, shops, floor sweeping, etc. About 52 kg/day solid waste generated; on-site storage facility is available. Separate staffs exist for waste management. No segregation practiced; mixed

garbage transferred from bins through trolleys and disposed at Dhalaos. Wastewater generated is discharged into city sewer. ETP installed. Air pollution source is DG set. Grease & oil needs proper disposal.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers.
- (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities.
- (iv) Proper training shall be given to all the employees about the management of solid waste and best practices.

42. BUS TERMINUS, Q BLOCK, MANGALPURI

It was established in December, 2001 within an area of 3,900 sqm. It has 25 bays. Daily 85 buses ply through the depot and carries around 2000 passengers. Waste generation sources identified are rooms (5) and floor sweeping. About 7 kg/day solid waste generated; on-site storage facility is available. Part-time staffs engaged for waste management. No segregation is practiced; mixed garbage is transferred from bins through trolleys and disposed at Dhalaos. Waste water generation is nil. Waste bins need to place.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper documentation of the quantity and quality solid waste generated and its disposal methods shall be maintained by the depot authorities.
- (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.

43. BUS TERMINUS, P- 3 BLOCK, SULTANPURI, DELHI

It was established in January, 2013 within an area of 2660 sqm. It has 20 bays. Daily 130 buses ply through the depot and carries around 6000 passengers. Waste generation sources identified are rooms (2 nos.) and floor sweeping. About 8 kg/day solid waste generated; on-site storage facility is not available. Part-time

staffs engaged for waste management. No segregation practiced; mixed garbage transferred from bins through pull cart and disposed at Dhalaos. Wastewater generation is nil. Waste bins need to place.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper documentation of the quantity and quality solid waste generated and its disposal methods shall be maintained by the depot authorities.
- (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.

44.DTC BUS DEPOT, SECTOR-6, ROHINI, DELHI

It was established in September, 1988 within an area of 20,245 sqm. It has 4 bays. Daily 30,000 passengers. Waste generation sources identified are rooms (2 nos.) and floor sweeping. Waste generation is not assessed. On-site storage facility is not available. Separate regular staffs engaged for waste management. No segregation practiced; mixed garbage transferred from bins through pull cart and disposed at open site. It has got valid consent. Waste water generation is 1000 lit. and discharged into public sewer. ETP installed. DG set exists. Waste management needs improvement.

Recommendations:

- (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.
- (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers.
- (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities.
- (iv) Proper training shall be given to all the employees about the management of solid waste and best practices.

45.SHAKURBASTI RAILWAY STATION, NORTHERN RAILWAY, RANIBAGH, DELHI-34

It was established in February, 2017 within an area of 6,080 sqm. It has 3 platforms. Daily 100 trains passes through the station and carries around 5000

passengers. Separate staffs (5 Nos.) engaged for waste management. Waste generated from rooms and station yards. About 190 kg/day of solid waste generated. No segregation practiced; mixed garbage transferred from bins (1 no.) through trolleys (2nos) and disposed at nearest Dhalaos. Wastewater generation is not assessed.

Recommendations:

- (i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.
- (ii) Dumping of waste in the dalaos should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the MCD employees.
- (iii) Proper fines as per the guidelines shall be levied to the litterers.
- (iv) Sewer lines along the track shall be constructed and connected to the nearby MCD sewers for the collection and transportation of wastewater/soils generated in the rails.
- (v) Proper tools shall be used for removing the night soil from the tracks and manual scavenging shall be discouraged.

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S.No	Name of the Bulk Waste Generator/Hospital	Observations		Recommendations
	Hospitals	Measures Taken	Short-comings / Deficiencies	
(1)	<p><u>Lok Nayak Jai Prakash Hospital</u></p> <p>No. of Beds : 1649 BMW Generation : 596 kg/day WW Generation : 1300 KLD Untreated WW : 700 KLD Solid Waste : _____ Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMWM Rules, 2016</p> <p>(ii) Temporary waste storage is provided.</p> <p>(iii) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Nilothi.</p> <p>(iv) Installed STP of capacity 600 KLD was found under shut down and STP of 1200 KLD found under construction. No Dual plumbing system exists.</p>	<p>(i) Bin system for MSW is not followed in accordance with the SWM Rules, 2016.</p> <p>(ii) Pre-treatment of BMW is not practiced.</p> <p>(iii) Bar coding systems for BMW is not practised.</p> <p>(iv) Effluent generated from laundry is being discharged directly in to sewer.</p>	<p>Recommended for issuance of letter for improvements of existing practices w.r.t following:</p> <p>(i) Bin system to be followed for collection of Solid waste in accordance with the SWM Rules, 2016.</p> <p>(ii) On-site Pre-treatment of BMW to be ensured from labs & OT also.</p> <p>(iii) Bar coding systems for BMW is to be practised.</p> <p>(iv) Trolleys should be provided for transfer of BMW to storage area.</p> <p>(v) The quantity of liquid waste generation has not been assessed. Provision may be made to treat entire wastewater and the treated water be recycled for ensuring zero discharge.</p> <p>(vi) The temporary waste storage facility required to be maintained hygienic.</p> <p>(vii) Waste collection bins needs replacement with more numbers.</p> <p>(viii) Waste management cell needs to be strengthened.</p> <p>(ix) The waste management staffs to be provided with protective gears.</p> <p>(x) Training protocols to be created and followed more rigorously for doctors, nurses & waste management staff and STP</p>

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				operators.
(2)	<p>Hindu Rao Hospital No. of Beds : 980 BMW Generation : 326 kg/day WW Generation : 1530 KLD Untreated WW : 1530 KLD Solid Waste : ____Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMW Rules, 2016 (ii) Temporary waste storage is provided. (iii) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Nilothi. (iv) STP found under construction. No Dual plumbing system exists.</p>	<p>(i) Bin system for MSW is not followed in accordance with the SWM Rules, 2016. (ii) Bar coding systems for BMW is not practised. (iii) Effluent generated from Hospital is being discharged directly in to sewer.</p>	<p>(i) On-site Pre-treatment of BMW to be ensured from labs & OT also. (ii) STP should be installed and treated waste quality maintained (iii) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016. (iv) Arrange regular training for staffs.</p>
(3)	<p>Tirth Ram Shah Hospital No. of Beds : 200 BMW Generation : 206 kg/day WW Generation : 70 KLD Untreated WW : NIL Solid Waste : ____Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMW Rules, 2016 (ii) Pre-treatment of BMW is practiced (iii) Temporary waste storage is provided. (v) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Nilothi. (iv) Treated effluent from STP is being used for cooling towers and gardening. No Dual plumbing system exists.</p>	<p>(i) Bar coding systems for BMW is not practised. (ii) Bin system for MSW is not followed in accordance with the SWM Rules, 2016. (iii) No provision for treatment of sludge is done.</p>	<p>(i) Implement BMW rules, 2016 in r/o transporting & storage of waste in hospital premises. (ii) Implement Bar code systems (iii) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016. (iv) Upload information on web site.</p>
(4)	<p>Satyawadi Raja Harish Chander Hospital No. of Beds : 200 BMW Generation : 90 kg/day WW Generation : 220 KLD Untreated WW : NIL Solid Waste : ____Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMW Rules, 2016 (ii) Pre-treatment of BMW is not practiced (iii) Temporary waste storage is provided. (iv) BMW is disposed through CBWTF (M/s Biotic waste Solutions) located at SSI Industrial Area at GTK Road. (v) Installed ETP of capacity 300 KLD found operational. No Dual plumbing system exists. (vi) Treated effluent from STP is being used for gardening.</p>	<p>(i) No pre treatment of infectious wastewater was observed. (ii) No secondary sedimentation tank was in place. (iii) No provision for treatment of sludge is done. (iv) No proper documentation of the quantity of sewage/solid waste generated is being maintained by the hospital management.</p>	<p>(i) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016 (ii) Pre treatment of infectious wastewater shall be done properly as per Bio Medical Waste (Management and Handling) Rules, 2016. (iii) The existing STP's function shall be monitored for adequacy and efficiency. (iv) Proper records/documentation shall be maintained on the waste (Solid & Liquid)</p>

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			(v) Bin system for MSW is not followed in accordance with the SWM Rules, 2016.	generation and disposal procedures. (v) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.
(5)	<p>Rajiv Gandhi Cancer Institute and Research Centre</p> <p>No. of Beds : 302 BMW Generation : 201 kg/day WW Generation : 220 KLD Untreated WW : NIL KLD Solid Waste : _____Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMWM Rules, 2016</p> <p>(ii) Pre-treatment of BMW is practiced</p> <p>(iii) Temporary waste storage is provided.</p> <p>(iv) BMW is disposed through CBWTF.</p> <p>(vii) Installed ETP of capacity 120 KLD found operational. No Dual plumbing system exists.</p> <p>(vi) Solid waste is being collected separately and given to the private contractor and no proper knowledge with staff members about the disposal of same.</p> <p>(vii) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Niloti.</p>	<p>(i) No provision for treatment of sludge is done.</p> <p>(vi) Bin system for MSW is not followed in accordance with the SWM Rules, 2016.</p> <p>(ii)</p>	<p>(i) Pre treatment of infectious wastewater shall be done properly as per Bio Medical Waste (Management and Handling) Rules, 2016.</p> <p>(ii) The existing STP's function shall be monitored for adequacy and efficiency. Proper documentation shall be maintained on the waste (Solid & Liquid) generation and disposal procedures.</p> <p>(iii) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.</p> <p>(vi) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016</p>
(6)	<p>Fortis Hospital</p> <p>No. of Beds : 262 BMW Generation : 296 kg/day WW Generation : 153 KLD Untreated WW : 40 KLD Solid Waste : _____Kg/day</p>	<p>(i) Segregation of bio-medical waste (BMW) is practiced as per BMWM Rules, 2016</p> <p>(ii) Pre-treatment of BMW is practiced</p> <p>(iii) Temporary waste storage is provided.</p> <p>(iv) BMW collected is transferred with closed trolleys.</p> <p>(v) STP of 300 KLD with SAFF reactor technology along with MGF, ACF and softening is being employed</p> <p>(viii) Part of treated effluent from STP being used for gardening and cooling tower.</p>	<p>(i) No test report is available to determine the quality of inlet wastewater.</p> <p>(ii) No sludge treatment is being employed, as of now even, though filter press is installed for dewatering the sludge.</p> <p>(iii) Sharp smell was felt during the site visit which may have the impact on the health of the</p>	<p>(i) The existing STP's function shall be monitored for adequacy and efficiency.</p> <p>(ii) Proper documentation shall be maintained on the waste (Solid & Liquid) generation and disposal procedures.</p> <p>(iii) Hospital Management shall ensure the proper treatment of sludge generated from the STP before disposal.</p> <p>(iv) Proper ventilation shall be provided in</p>

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		(ix) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Nilothi.	operators. (vii) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016	the STP area to prevent the development of anaerobic condition in the STP and to reduce the odour. (viii) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016
(7)	<p>BLK Super Speciality Hospital</p> <p>No. of Beds : 465 BMW Generation : 500-kg/day WW Generation : 500 KLD Untreated WW : NIL Solid Waste : _____Kg/day</p>	<p>(i) Pre-treatment of BMW is practiced (ii) Temporary waste storage is provided. (iii) BMW collected is transferred with closed trolleys. (iv) Installed ETP of 550 KLD (i.e., one 300 KLD and another 250 KLD) outsourced to RBN Enviro for O&M and treated effluent is being used for cooling towers and gardening. (v) BMW is disposed through CBWTF (M/s SMS Grace BMW Pvt. Ltd) located at Nilothi.</p>	<p>(i) Segregation and two Bin system for MSW is not followed in accordance with the SWM Rules, 2016. (ii) Gloves and needle caps were observed in the bags of non-infectious waste at the storage site. (iii) There were no records maintained on the quantity of solid waste generated.</p>	<p>(i) Bar coding of BMW bags shall be followed. (ii) Proper documentation shall be maintained on the solid waste generation and disposal procedures. (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done and no infectious shall be allowed to mix with the general solid waste. (iv) Proper pre-treatment in accordance to the BMW Rules, 2016 shall be given to the OT wastewater before treating the same in ETP. (ix) Hospital employees shall be made aware of the process of treatment of sludge generated from the ETP and its method of disposal. (x) Bin system to be followed for segregation and collection of Solid waste in accordance with the SWM Rules, 2016</p>
(8)	<p>New Delhi Railway Station</p> <p>No. of platform : 16</p>	(i) Biodegradable and recyclable waste is managed by the NGO Chinton and the	(i) Segregation and two Bin system for MSW is not followed in accordance with the SWM Rules,	(i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated

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	<p>Passengers footfall : ≈1 lakh/day Solid waste : 1400 kg/day Fine imposed : 3 crore</p>	<p>same is converted to compost.</p> <p>(ii) Solid waste is being segregated outside the platform area but within railway premises.</p> <p>(iii) Solid waste is being collected and given to the private contractor for disposal.</p> <p>(iv) Liquid waste from mechanical washing of tracks, laundry units and from toilets being directly discharged to sewer.</p> <p>(v) Railways have started installing bio-toilets and the task stands completed for 14,000 trains. A 100% conversion of toilets is targeted for 2019.</p> <p>(vi)</p>	<p>2016.</p> <p>(ii) Solid waste found scattered along the track in yard portion of station.</p> <p>(iii) No on-site STP available at present.</p> <p>(iv) Foul smell was experienced.</p>	<p>clearly for the collection of waste in the segregated manner.</p> <p>(ii) Source segregation facility to be provided for wet waste and dry wastes.</p> <p>(iii) Waste collection records to be maintained.</p> <p>(iv) Material recovery facility to be modernized</p> <p>(v) Pit composting needs to be operated hygienic way. Odour suppression steps required.</p> <p>(vi) Non-recyclable dry waste needs proper disposal.</p> <p>(vii) On-site STP facility to be installed.</p> <p>(viii) Treated water to be reused/ recycled for washing of tracks etc.</p> <p>(ix) Awareness campaigns to be more frequent.</p> <p>(x) Waste management cell needs to be established for proper coordination,</p>
(9)	<p>Narela Railway Station</p> <p>No. of platform : 02 Passenger's footfall ≈10000/day Solid waste : 100kg/day Fine imposed : Nil</p>	<p>(i) Solid waste is being segregated outside the platform area but within railway premises.</p> <p>(ii) Solid waste is being collected and given to the municipality for disposal.</p> <p>(iii) Temporary waste storage located within premises.</p> <p>(iv) Record maintained for waste collections.</p> <p>(v) Station yard maintained cleanliness, no littering observed.</p>	<p>(i) Segregation and two Bin system for MSW is not followed in accordance with the SWM Rules, 2016.</p> <p>(ii) Sewage generated from the station is connected to Municipality sewer line.</p>	<p>(i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.</p> <p>(ii) Dumping of waste in the Railways land should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the</p>

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				MCD employees.
(10)	<p>Sarai Rohilla Railway Station</p> <p>No. of platform : 05 Passenger's footfall : 30,000/day Solid waste : kg/day Fine imposed : Rs. 500 to Rs. 5000</p>	<p>(i) Solid waste is being segregated outside the platform area but within railway premises.</p> <p>(ii) Solid waste is being collected and given to the private contractor for disposal.</p> <p>(iii) Station cleaning was outsourced</p> <p>(iv) Solid waste found scattered along the railway tracks. Rag pickers collect waste from railway tracks.</p>	<p>(i) Segregation and two Bin system for MSW is not followed in accordance with the SWM Rules, 2016.</p> <p>(ii) Effluent generated from the kitchen, toilets, washing of tracks/trains/platforms is being discharged into sewer without any treatment.</p> <p>(iii) The collected wastes are dumped in the nearby dalaos.</p> <p>(iv) No proper cleaning of tracks was observed.</p>	<p>(i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.</p> <p>(ii) Dumping of waste in the dalaos should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the MCD employees.</p> <p>(iii) Proper fines as per the guidelines shall be levied to the litterers.</p> <p>(iv) Sewer lines along the track shall be constructed and connected to the nearby MCD sewers for the collection and transportation of wastewater/soils generated in the rails.</p> <p>(v) Proper tools shall be used for removing the night soil from the tracks and manual scavenging shall be discouraged.</p>
(11)	<p>DTC Bus Depot , Rohini Sect-3</p> <p>No. of Buses : 123 Passenger flow : 35,000/Day Waste water Generation 10 KLD</p>	<p>i) Solid waste is being collected and dumped into the nearby dhalao without any segregation and treatment.</p> <p>ii) 12000 lit/day recycled water is being supplied by DJB for washing of buses</p>	<p>(i) No segregation of solid waste being carried out and same is being dumped into nearby dalaos.</p> <p>(ii) No treatment is employed to the used wash waters and discharged into the sewerage networks.</p> <p>(iii) No proper maintenance of the records for waste generation and disposal.</p>	<p>(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.</p> <p>(ii) Proper pre-treatment shall be given to the wash water before letting into the MCD sewers.</p> <p>(iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the</p>

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				<p>depot authorities.</p> <p>(iv) Proper training shall be given to all the employees about the management of solid waste and best practices.</p>
(12)	<p>Maidans Hotels</p> <p>No. of Rooms : 55 Solid waste : 100kg /day Waste water : 80 KLD STP(Biological) : 125 KLD</p>	<p>(i) Solid is collected & disposed daily. (ii) Temporary storage facility exists for dry and wet garbage. (iii) Wastewater generated is treated through an STP of 125 KLD capacity with post treatment of activated carbon filter. (iv) The treated waste water is partly (60 m³/d) is recycled and rest discharged into city sewer. (v) ETP sludge is composted and used as manure. (vi) The treated effluent quality is got tested through a private lab every 6 months.</p>		<p>(i) Waste management needs improvement. (ii) Arrange training for staffs (iii) Maintain zero discharge/zero waste. (iv) Testing of treated waste water frequency to be enhanced to at-least monthly.</p>
(13)	<p>Jaypee Siddharth Hotel</p> <p>No. of Rooms : 94 Solid waste : 500kg /day Waste Water : 146 KLD STP(Biological) : 156 KLD</p>	<p>(i) STP of total capacity 156 KLD is installed including ETP of 60 KLD. (ii) Both the treatment plants have filtration, softening and disinfection as post treatment processes. (iii) Treated wastewater is used in horticulture, washing and cooling tower. (iv) Solid waste is being segregated at source. The organic waste is being treated through OWC of capacity 500 kg/day. The compost produced is used for horticulture.</p>		<p>(i) The quality of compost shall be tested periodically in any certified labs and the records of the same shall be maintained properly.</p>
(14)	<p>Crown Plaza Hotel, sect-10, Rohini</p> <p>No. of Rooms :</p>	<p>(i) A STP of capacity 260 KLD and an ETP of 100 KLD is in operation. Both are working with biological process.</p>	<p>Proper documentation on the quantity of compost being generated is not</p>	<p>(i) The mall management shall setup additional treatment facility for the</p>

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	<p>Solid waste : 600 kg /day Waste water : 302 KLD STP(Biological) : 125 KLD</p>	<p>(ii) Treated effluent being used for gardening and cooling tower. (iii) Out of 450 Kg/day of organic waste generated, only 50 kg/day is being composted using OWG technology. However, the rest is given to the private contractor to transport the same to deliver this to the Goshalas.</p>	<p>maintained by the management.</p>	<p>excess waste generated as the current practice of disposal has serious gaps in proper management of solid waste. ii) The management shall maintain a proper record of the quantity of the compost being generated on daily basis</p>
(15)	<p>Ambiance Mall, Sect-10, Rohini Solid waste : 1000 kg /day Waste water : 100 KLD ETP(Biological) : 150 KLD</p>	<p>(i) ETP of 150 KLD with MBR and ASP technology is in operation and recycled for flushing and horticulture. Another plant is also under proposal. (ii) Zero discharge is being maintained by the mall management in regard to the sewage. (iii) The waste is transferred by trolley and disposed at dhalao.</p>	<p>(i) The solid waste is being generated in Big Bazaar shopping centre and is being dumped into the dhalao by the private contractor and management is not aware of the disposal process. (ii) No proper documentation of the waste generation and treatment is available</p>	<p>i) Big Bazaar management shall ensure treating the waste within the mall premises itself as far as possible as they are coming under the category of bulk generators as per the Solid Waste Management Rules, 2016. In case the same is not viable, then the management shall establish a centralized treatment facility integrating various branches of the management for the treatment of organic waste. ii) The proper record on the same shall be maintained by the management.</p>
(16)	<p>Delhi Technological University No of Rooms :1012 Solid waste : 5085 kg /day</p>	<p>(i) Kitchen waste is brought to a biogas facility for generation of methane for use in college canteen and generation of manure for gardening.</p>	<p>(i) STP does not exist and connected to sewer line. (ii) The waste collected directly transferred by trolley to dhalao for disposal (iii) No treatment Facility available</p>	<p>(i) Create awareness among residents for segregation and collection (ii) Implement source segregation (iii) minimise water consumption and maintain zero Discharge (iv) Prohibit garbage throwing/littering in the premises Maintain records of wastes (v) Segregation and collection of Solid waste in accordance with the SWM Rules, 2016 is to</p>

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				be implemented.
(17)	<p>Hindu College, Delhi University</p> <p>No of Rooms :119 Solid waste :241 kg /day</p>	<p>(i) E-waste as informed is disposed off through registered recyclers as per laid down procedure.</p> <p>(ii) The college is availing services of Jagruti, an NGO, for recycling of used waste paper to get writing pads and invitation cards for college annual day function.</p>	<p>(i) Waste management cell does not exist</p> <p>(ii) on-site STP of 500 KLD capacity is under construction.</p> <p>(iii) The waste collected directly transferred by trolley to dhalaos for disposal</p>	<p>(i) Waste management cell to be established</p> <p>(ii) ETP should be installed and recycle treated wastewater from horticulture & flushing.</p> <p>(iii) Start daily collection of wastes.</p> <p>(iv) Waste management needs improvement. in accordance with the SWM Rules, 2016 is to be implemented.</p>
(7)	<p>ESI Hospital</p> <p>No. of Beds : 300 BMW Generation : 129 kg/day WW Generation : KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) Pre-treatment of waste with chemical disinfection, autoclaving and spore test is practiced regularly.</p> <p>(ii) Waste disposed through registered recyclers.</p> <p>(iii) Facilities available are colour coded bins, segregation, waste removed before 48 hrs, record maintained and provides training to staffs.</p>	<p>(i) No ETP installed.</p>	<p>(vii) Install ETP for treating wastewater</p> <p>(viii) Implement BMW rules, 2016</p> <p>(ix) Organize regular training to new staffs</p> <p>(x) Implement bar code system</p> <p>(xi) Upload information on website</p>
(8)	<p>Max Super Speciality Hospital</p> <p>No. of Beds : 250 BMW Generation : 565 kg/day WW Generation : KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) BMW transferred by covered trolleys and stored at temporary storage.</p> <p>(ii) Pre-treatment of waste with chemical, autoclaving and spore test is practiced.</p> <p>(iii) ETP provided of capacity 12.5 KLD and treated effluent is being used for horticulture and flushing in water closets.</p>		<p>(i) Implement BMW rules, 2016</p> <p>(ii) Organize regular training to new staffs</p> <p>(iii) Implement bar code system</p> <p>(iv) Upload information on website</p>
(9)	<p>Baba Saheb Ambedkar Hospital</p> <p>No. of Beds : 500 BMW Generation : 194 kg/day WW Generation : KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) BMW transferred by covered trolleys and stored at temporary storage.</p> <p>(ii) Pre-treatment of waste with chemical, autoclaving and spore test is practiced.</p> <p>(iii) ETP provided of capacity 200 KLD and treated effluent is being used for horticulture and toilet flushing.</p>		<p>(i) Bar coding of BMW bags shall be followed.</p> <p>(ii) Uploading BMW information on website shall be done.</p> <p>(iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done.</p> <p>(iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures.</p>

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				(v) Hospital employees shall be made aware of the process of treatment of solid waste & sludge generated from the ETP and their disposal methods.
(10)	<p>Saroj Super Speciality Hospital</p> <p>No. of Beds : 154 BMW Generation : 113 kg/day WW Generation : 35 KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) BMW transferred by covered trolleys and stored at temporary storage. (ii) Pre-treatment of waste with chemical is practiced. (iii) ETP provided of capacity 35 KLD. (v) BMW is disposed through CBWTF.</p>		<p>(i) Bar coding of BMW bags shall be followed. (ii) Uploading BMW information on website shall be done, if not done already. (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done. (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures. (v) Hospital employees shall be made aware of the process of treatment of solid waste & sludge generated from the ETP and their disposal methods.</p>
(11)	<p>Shri Balaji Action Medical Institute</p> <p>No. of Beds : 250 BMW Generation : 274 kg/day WW Generation : 1.52 KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) Pre-treatment of waste for microbiology, lab wastes, bloods, etc. autoclave operational, Spore test is practiced. (ii) ETP provided of capacity 35 KLD and treated effluent is being used for horticulture and toilet flushing. (iii) ETP sludge is used as manure.</p>		<p>(i) Bar coding of BMW bags shall be followed. (ii) Uploading BMW information on website shall be done, if not done already. (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done. (iv) Proper documentation shall be maintained on the solid waste generation and disposal procedures. (v) ETP sludge shall be adequately treated before using in gardening. (vi) Hospital employees shall be made aware of the process of treatment of solid waste and its methods of disposal.</p>
(12)	<p>Jaipur Golden Hospital</p> <p>No. of Beds : 242 BMW Generation : 117 kg/day WW Generation : KLD Untreated WW : KLD Solid Waste : ____Kg/day</p>	<p>(i) Pre-treatment of waste to lab wastes, microbiological wastes, etc. with chemical disinfectants, autoclaving followed by shredders. is practiced.</p>	(i) No ETP installed.	<p>(i) Bar coding of BMW bags shall be followed. (ii) Uploading BMW information on website shall be done, if not done already. (iii) Proper segregation of solid waste as per SWM Rules, 2016 shall be done. (iv) Proper documentation shall be</p>

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				<p>maintained on the solid waste generation and disposal procedures.</p> <p>(v) ETP of adequate capacity shall be installed at the earliest for treating the wastewater generated in the hospital.</p> <p>(vi) Proper pre-treatment in accordance to the BMW Rules, 2016 shall be given to the infectious wastewater before treating/disposing the same.</p> <p>(vii) Hospital employees shall be made aware of the process of treatment of solid waste and its methods of disposal.</p>
(17)	<p>Shakurbasti Railway Station</p> <p>No. of platform : 03 Passenger's footfall : 5000/day Solid waste : 190 kg/day Fine imposed :</p>	(i) Separate staffs (5 Nos.) engaged for waste management.	<p>(i) No segregation practiced; mixed garbage transferred from bins (1 no.) through trolleys (2nos) and disposed at nearest Dhalaos.</p> <p>(ii) Wastewater generation is not assessed.</p>	<p>i) Two bin systems shall be employed and details of the type of waste to be dropped in each bin shall be indicated clearly for the collection of waste in the segregated manner.</p> <p>ii) Dumping of waste in the dalaos should be stopped immediately and the station in-charge shall ensure the proper handover of the entire solid waste generated in segregated manner to the MCD employees.</p> <p>iii) Proper fines as per the guidelines shall be levied to the litterers.</p> <p>iv) Sewer lines along the track shall be constructed and connected to the nearby MCD sewers for the collection and transportation of wastewater/soils generated in the rails.</p> <p>v) Proper tools shall be used for removing the night soil from the tracks and manual</p>

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

				scavenging shall be discouraged.
(19)	Rohini sec-16 DTC Bus Depot-II No. of Buses: 90 Passenger flow: 23,159/Day Waste water Generation 0.5 KLD Solid waste Generation: 35 kg /day	(i) ETP installed for treatment of wastewater and treated wastewater recycled (10KLD) for vehicle washing. (ii) ETP sludge composting is done. (iii) Waste storage facility available in the premises and disposed into the dhalaos.	(i) Waste management cell does not exist. (ii) No segregation is practiced; mixed solid waste placed in corridors. Waste transferred by trolleys.	(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology. (ii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities. (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.
(20)	Nangloi DTC Bus Depot No. of Buses: 101 Passenger flow: 17,000/Day Solid waste Generation: 44 kg /day	(i) Separate staffs exist for waste management.	(i) No segregation practiced; mixed garbage transferred through trolleys and disposed at Dhalaos. (ii) Wastewater generated is discharged into city sewer. Air pollution source is DG set.	(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology. (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers. (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities. (iv) Proper training shall be given to all the employees about the management of

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

Annexure

				solid waste and best practices.
(21)	Peeragarhi DTC Bus Depot No. of Buses: 90 Passenger flow: 15,000/Day Solid waste Generation: 52kg /day	(i) Separate staffs exist for waste management. (ii) ETP installed.	(i) No segregation practiced; mixed garbage transferred through trolleys and disposed at Dhalaos. (ii) Wastewater generated is discharged into city sewer. Air pollution source is DG set.	(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology. (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers. (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities. (iv) Proper training shall be given to all the employees about the management of solid waste and best practices.
(22)	Mangalpuri bus Terminus No. of Buses: 85 Passenger flow: 2000/Day Solid waste Generation: 7kg /day	(i) On-site storage facility is available. (ii) Part-time staffs engaged for waste management. (iii) Waste water generation is nil.	(i) No segregation practiced; mixed garbage transferred through trolleys and disposed at Dhalaos	(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology. (ii) Proper documentation of the quantity and quality solid waste generated and its disposal methods shall be maintained by the depot authorities. (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.
(23)	Sultanpurii bus Terminus No. of Buses: 130 Passenger flow: 6000/Day Solid waste Generation: 8kg /day	(i) Part-time staffs engaged for waste management. (ii) Waste water generation is nil.	(i) On-site storage facility is available. (ii) No segregation practiced; mixed garbage transferred through pull Cart and disposed at Dhalaos	(i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology.

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				<ul style="list-style-type: none"> (ii) Proper documentation of the quantity and quality solid waste generated and its disposal methods shall be maintained by the depot authorities. (iii) Proper training shall be given to all the employees about the management of solid waste and best practices.
(24)	Rohini Sec-6 DTC bus Depot Passenger flow: 30,000/Day Waste water Generation: 1KLD	<ul style="list-style-type: none"> (i) Separate staffs exist for waste management. (ii) ETP installed. 	<ul style="list-style-type: none"> (i) No segregation practiced; mixed garbage transferred through pull Cart and disposed at Dhalaos (ii) DG Set exists. 	<ul style="list-style-type: none"> (i) Proper arrangement shall be made by the depot authority for the collection in segregated manner and disposal of the solid waste in the authorized area and by scientifically proven methodology. (ii) Proper pretreatment shall be given to the wash water before letting into the MCD sewers. (iii) Proper documentation of the quantity and quality of the wastewater and solid waste generated and their disposal methods shall be maintained by the depot authorities. (iv) Proper training shall be given to all the employees about the management of solid waste and best practices.
(27)	Signature View Apartment No. of Flats: 336	<ul style="list-style-type: none"> (i) Separate staffs exist for housekeeping and waste management. (ii) Source segregation is done at household level. (iii) Waste transferred daily by trolleys and disposed at nearby dhalao from where it is carried away by MCD. (iv) Sewage from individual household connected to common sewer and then trunk sewer. (v) RWA is in planning for installing composting facility for organic waste of the society. 		<ul style="list-style-type: none"> (i) Create awareness among residents for segregation and collection (ii) Arrange on-site composting of organic wastes/horticultural wastes (iii) Prohibit garbage throwing/littering in the premises (iv) Maintain records of wastes

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

Annexure

(28)	Nagin Lake Apartment No.of Flats: 325 Solid waste Generation: 360kg /day	(i) Separate staffs engaged for solid waste management. Single bin collection system exists,	(i) No segregation is practiced at household level, no facility for composting and on-site storage (ii) The waste collected is transported to the dhalaos for disposal. (iii) Wastewater is discharged into city sewer line.	(i) Create awareness among residents for segregation and collection (ii) Implement source segregation (iii) Install ETP and recycle wastewater and minimise water consumption (iv) Prohibit garbage throwing/littering in the premises (v) Maintain records of wastes
(29)	Ekta Enclave No. of Flats: 410 Solid waste Generation: 390 kg /day	(i) Separate staffs engaged for solid waste management. Single bin collection system exists,	(i) No segregation is practiced at household level, no facility for composting and on-site storage (ii) The waste collected is transported to the dhalaos for disposal. (iii) Wastewater is discharged into city sewer line.	(i) Create awareness among residents for segregation and collection (ii) Implement source segregation (iii) Install ETP and recycle wastewater and minimise water consumption (iv) Prohibit garbage throwing/littering in the premises (v) Maintain records of wastes
(30)	Jhang Society No of Flats: 490 Solid waste Generation: 850 kg /day	(i) Separate staffs engaged for solid waste management. Single bin collection system exists,	(i) No segregation is practiced at household level, no facility for composting and on-site storage (ii) The waste collected is transported to the dhalaos for disposal. (iii) Wastewater is discharged into city sewer line.	(i) Create awareness among residents for segregation and collection (ii) Implement source segregation (iii) Install ETP and recycle wastewater and minimise water consumption (iv) Prohibit garbage throwing/littering in the premises (v) Maintain records of wastes
(31)	Shri kirshna Apartment No of Flats: 310 Solid waste Generation: 240 kg /day		(i) No segregation is practiced at household level, no facility for composting and on-site storage. (ii) Wastes are being disposed in	(i) Create awareness among residents for segregation and collection

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

			<p>dhalaos.</p> <p>(iii) ETP/STP does not exist, wastewater directly discharged into city sewer.</p> <p>(iv) One DG set is observed in the premises with exhaust duct.</p>	<p>(ii) Implement source segregation</p> <p>(iii) Install ETP and recycle wastewater and minimise water consumption</p> <p>(iv) Prohibit garbage throwing/littering in the premises</p> <p>(v) Maintain records of wastes</p>
(32)	<p>Delhi Citizen Society No. of Flats: 300 Solid waste Generation: 450 kg /day</p>	<p>(i) Separate staffs engaged for solid waste management. Single bin collection system exists,</p>	<p>(i) No segregation is practiced at household level, no facility for composting and on-site storage</p> <p>(ii) The waste collected is transported to the dhalaos for disposal.</p> <p>(iv) Wastewater is discharged into city sewer line.</p> <p>(v) One DG Set available.</p>	<p>(i) Create awareness among residents for segregation and collection</p> <p>(ii) Implement source segregation</p> <p>(iii) Install ETP and recycle wastewater and minimise water consumption</p> <p>(iv) Prohibit garbage throwing/littering in the premises</p> <p>(v) Maintain records of wastes</p>
(33)	<p>Bharat Apartment No. of Flats:308 Solid waste Generation: 462 kg /day</p>	<p>(i) Separate staffs engaged for solid waste management. Single bin collection system exists,</p>	<p>(i) No segregation is practiced at household level, no facility for composting and on-site storage</p> <p>(ii) The waste collected is transported to the dhalaos for disposal.</p> <p>(iii) Wastewater is discharged into city sewer line.</p> <p>(iv) One DG Set available</p>	<p>(i) Create awareness among residents for segregation and collection</p> <p>(ii) Implement source segregation</p> <p>(iii) Install ETP and recycle wastewater and minimise water consumption</p> <p>(vi) Prohibit garbage throwing/littering in the premises</p> <p>(vii) Maintain records of wastes</p>
(34)	<p>Residential Society No. of Flats: 651 Solid waste Generation: 550 kg /day</p>		<p>(i) No segregation of waste into three separate streams at the source is being followed even though Rs. 50 per household is being charged by the private</p>	<p>(i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately.</p>

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

	Waste water Generation: 50 lit/house/day		<p>contractor for the collection of waste from the households.</p> <p>(ii) The mixed waste collected in the premises is being dumped in the nearby dhalao.</p> <p>(iii) Traces of solid waste dumping on the sides of the roads and in the park near by the dhalao were observed even though the waste lying there where cleaned just before the committee's visit. Further, the dumping was also observed in the surrounding drains.</p> <p>(iv) No existing sewage treatment plant for the premises.</p>	<p>(ii) Awareness to be created among households for segregation and prevent throwing of garbage in public places.</p> <p>(iii) Fine shall be levied by the MCD on the defaulting households.</p> <p>(iv) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible.</p> <p>(v) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh Bharat Mission.</p> <p>(vi) Dhalao shall be covered and gates shall be provided for preventing the unauthorized dumping of waste by the private contractors or the residents of the community.</p> <p>(vii) Unauthorized dumping of waste around the dhalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.</p> <p>(viii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified on daily basis and proper records shall be maintained by the RWA.</p>
(35)	Ghalib Memorial cooperative GP housing Society PVT LTD No. of Flats:300	(i) Separate staffs engaged for solid waste management. Single bin collection system exists,	(i) No segregation is practiced at household level, no facility for composting and on-site storage	(i) Create awareness among residents for segregation and collection

Template of Table showing Inspections with respect to Bulk-Waste Generators and Hospitals

	Solid waste Generation: 450 kg /day		<ul style="list-style-type: none"> (ii) The waste collected is transported to the dhalaos for disposal. (iii) Wastewater is discharged into city sewer line. (iv) ETP is Not available 	<ul style="list-style-type: none"> (ii) Implement source segregation (iii) Install ETP and recycle wastewater and minimise water consumption (iv) Prohibit garbage throwing/littering in the premises (v) Maintain records of wastes
(36)	<p>Jhawaar Lal Nehru cooperative GP housing Society No. of Flats:300</p> <p>Solid waste Generation: 480 kg /day</p>	(i) Separate staffs engaged for solid waste management. Single bin collection system exists,	<ul style="list-style-type: none"> (i) No segregation is practiced at household level, no facility for composting and on-site storage (ii) The waste collected is transported to the dhalaos for disposal. (iii) Wastewater is discharged into city sewer line. (iv) ETP is Not available 	<ul style="list-style-type: none"> (i) Create awareness among residents for segregation and collection (ii) Implement source segregation (iii) Install ETP and recycle wastewater and minimise water consumption (iv) Prohibit garbage throwing/littering in the premises (v) Maintain records of wastes
(37)	<p>Neelkant Apartment No. of Flats:346</p> <p>Solid waste Generation: 495 kg /day</p>		<ul style="list-style-type: none"> (i) Solid waste is being collected and dumped into the nearby dalao without any segregation and treatment by the private collector. (ii) Sewage generated is being discharged into the sewerage networks without any treatment. (iii) No proper maintenance of the records for waste generation and disposal (iv) Sources of air pollution identified in 3 DG sets (v) Spillage of waste/ water not observed. 	<ul style="list-style-type: none"> (i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately. (ii) Fine shall be levied by the MCD on the defaulting households. (iii) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible. (iv) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh

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				<p>Bharat Mission.</p> <p>(v) Dalao shall be provided with gates for preventing the unauthorized dumping of waste by the private contractors or the residents of the community.</p> <p>(vi) Unauthorized dumping of waste around the dalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.</p> <p>(vii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified daily basis and proper records shall be maintained by the RWA.</p>
(38)	<p>Printer Society No. of Flats: 438</p> <p>Solid waste Generation: 600 kg /day</p>		<p>(i) Solid waste is being collected and dumped into the nearby dalao without any segregation and treatment by the private collector.</p> <p>(ii) Sewage generated is being discharged into the sewerage networks without any treatment.</p> <p>(iii) No proper maintenance of the records for waste generation and disposal</p> <p>(iv) Sources of air pollution identified in 3 DG sets.</p>	<p>(i) Source segregation of waste into three separate streams as specified in solid waste management rules 2016 should be implemented immediately.</p> <p>(ii) Fine shall be levied by the MCD on the defaulting households.</p> <p>(iii) Decentralized waste treatment systems like OWCs or other low cost composting techniques shall be employed by the RWA for treating the organic waste within the premises as far as possible.</p> <p>(iv) Proper training in this regard shall be provided to the residents of the society either by the MCD officials or by hiring NGOs under IEC component of Swachh Bharat Mission.</p> <p>(v) Dalao shall be provided with gates for preventing the unauthorized dumping of</p>

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				<p>waste by the private contractors or the residents of the community.</p> <p>(vi) Unauthorized dumping of waste around the dalao area shall be prevented by levying fines as prescribed in Solid Waste Management Rules, 2016.</p> <p>(vii) Proper documentation of the solid and liquid waste generated in the campus shall be quantified daily basis and proper records shall be maintained by the RWA.</p>
(41)	<p>Unity Mall</p> <p>Solid waste Generation: 102kg /day</p>	<p>(i) ETP is installed and recycled for flushing and horticulture</p>	<p>(i) STP does not exist and connected to sewer line. Sources of air pollutions are 3 Nos. DG sets and Kitchen ducts.</p>	<p>(i) Create awareness among residents for segregation and collection</p> <p>(ii) Implement source segregation</p> <p>(iii) minimise water consumption and maintain zero Discharge</p> <p>(iv) Prohibit garbage throwing/littering in the premises</p> <p>(v) Maintain records of wastes</p>
(42)	<p>City Centre Mall</p> <p>Solid waste Generation: 800kg /day</p>	<p>(i) ETP is installed and recycled for flushing and horticulture</p>	<p>(i) STP does not exist and connected to sewer line. Sources of air pollutions are 3 Nos. DG sets and Kitchen ducts.</p> <p>(ii) The waste collected directly transferred by trolley to dhalaos for disposal</p>	<p>(i) Create awareness among residents for segregation and collection</p> <p>(ii) Implement source segregation</p> <p>(iii) minimise water consumption and maintain zero Discharge</p> <p>(iv) Prohibit garbage throwing/littering in the premises</p> <p>(v) Maintain records of wastes</p>
(43)	<p>D-Mall</p> <p>Solid waste Generation: 105 kg</p>	<p>(i) ETP is installed and recycled for flushing and horticulture</p>	<p>(i) STP does not exist and connected to sewer line.</p>	<p>(i) Create awareness among residents for</p>

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	/day		<p>Sources of air pollutions are 2 Nos. DG sets and Kitchen ducts.</p> <p>(ii) The waste collected directly transferred by trolley to dhalaos for disposal</p> <p>(iii) No treatment Facility available</p>	<p>segregation and collection</p> <p>(ii) Implement source segregation</p> <p>(iii) minimise water consumption and maintain zero Discharge</p> <p>(iv) Prohibit garbage throwing/littering in the premises</p> <p>(v) Maintain records of wastes</p>
		(ii)	(iv)	
		(iii)		

2nd Interim Report of Sub-Committee –IV (EDMC Area) on Inspection of Bulk Waste Generators and Hospitals

1) Introduction:

Hon'ble National Green Tribunal (NGT) in the matter of Original Application No. 199 of 2014 & Original Application No. 281 of 2016 (M.A. No. 1007/2016) filed by 'Almitra H. Patel & Anr. Vs. Union of India & Ors. & Kudrat Sandhu Vs. Govt. of NCT & Ors' vide its order dated 10.01.2017 constituted a Committee under Additional Secretary, MoEF&CC for inspection of the premises of bulk waste generators (hospitals, hotels, schools, group housing societies, market, shopping malls etc.) and for submission of a report on quantum of waste generated by as well as status of their waste management, including installation of STPs, connection with sewerage network etc.

The order also states that the committee under Additional Secretary, Ministry of Environment, Forest and Climate Change would be entitled to form different sub-committees from amongst above which will visit the various locations of Delhi where are the mass generator of waste are located and submit their report to the Tribunal. These sub-Committees would be entitled to direct assistance or also be participation of any of the Public Authorities, Corporations, Local Authority, DDA or any other Government and Semi-Government whenever they require participation of any officer of Governments or Authorities.

The aforesaid committee had convened two meetings with all stakeholders at MoEF&CC. The second meeting of the committee was held on 23/01/2017, wherein the following: 4 Sub-committees were constituted to cover the area of NCT, Delhi;

1. New Delhi Municipal Council Hon'ble G.K. Pandey, Former Member, NGT
2. South Delhi Municipal Corporation Hon'ble D.K. Agarwal, Former Member, NGT
3. North Delhi Municipal Corporation Dr. R. Dalwani, Former Advisor, MoEF&CC
4. East Delhi Municipal Corporation Dr. Rashid Hasan, Former Advisor, MoEF&CC

2) Inspections carried out by Sub-Committee IV:

The Sub-committee constituted under Dr. Rashid Hasan, Former Advisor, MoEF&CC for East Delhi Municipal Corporation Area has initiated inspection of Bulk Generators like hotels, Malls, Hospitals etc. on 04.02.2017 and onward. In pursuance to the Hon'ble NGT order 10.01.2017 in the afore-said matter, the Sub-committee under Dr. Rashid Hassan, Former Advisor, MoEF&CC for East Delhi Municipal Corporation Area (EDMCA) has inspected 34 no. of Bulk Generators like hospitals, hotels, Malls, Colleges, Railway Stations, Bus Terminals as well as one Waste to Energy Plant during 04.02.2017 to 15.02.2017, as per the details as given under:

1) Hospitals	:	09
2) Hotels	:	11*
3) Malls	:	05
4) Railway Stations	:	03
5) Colleges	:	03
6) Bus Terminals	:	02
7) Waste to Energy Plant, EDMC	:	01

Total		34
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* *Lemon Tree Hotel, EDM falls in the jurisdiction of U.P.*

**2nd Interim Report of Sub-Committee –IV (EDMC Area) on
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3) Check-list of Inspections

A check-list of inspections was used wherein data pertaining to the bulk producers like size of operations, waste management practices and wastewater management has been collected. The main points of inspection are given below:

- Size of operation (area /nos. of rooms /nos. of households /nos. of commuters /no of guests etc.)
- On-site waste segregation practices (as per various Waste management Rules)
- Availability of two-bin system for dry & wet waste and separate collection of domestic hazardous wastes.
- On-site processing facilities
- Facilities for on-site storage
- Arrangements for disposal
- Waste water treatment facilities
- Wastewater recycling or re-use practices
- Composting of organic waste

A summary of observations made by this committee in 34 facilities inspected during 04/2/2017 to 16/02/2017 are given at **Annexure-I**.

4) Common Observations

Following are the common observations of the Committee which are derived based on inspections of actual operation practices by bulk-waste generators in East Delhi Municipal Corporation:

- (i) Hospitals are aware of the requirement of following colour coded segregation and requirement of proper storage of biomedical waste prior to sending it to CBMWTF. Some of the hospitals still needs improvement and awareness in this regard.
- (ii) Most of STPs installed in hospitals are not functioning or not operated properly.
- (iii) Only single bins were installed for collection of solid waste in Railways Stations, bus-stations, colleges, hotels, etc.
- (iv) Some of the generators such as Hotels, Malls etc. have provided two bin system for collection of waste, but failing to practice good segregation practices
- (v) Most of the generators were not providing separate collection of domestic hazardous waste, and also not aware of the requirement of providing wrapping bags for sanitary napkins, used diapers etc. (for disposal in dry-waste bins)

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- (vi) Though the hotels have provided two bin system in kitchen, they fail to provide similar two bin waste collection from their guest rooms. Moreover, most of the hotels are failing in effective segregation of waste in two bin systems installed.
- (vii) Most of the bulk-waste generators are sending their waste through vendor without knowing how those vendors are disposing their waste ultimately (no proper arrangement for backward linkage).
- (viii) None of the waste pickers / waste collectors (vendors engaged by bulk waste generators) are authorised/registered by Municipal Corporation (as required under SWM Rules, 2016) to conduct their business.
- (ix) STPs have been installed in most of the hotels, malls, hospitals except in colleges, bus terminals, railway stations etc. However, most of these STPs were found defunct and not operated and maintained properly.
- (x) 21 STPs installed by bulk-waste generators (excluding Residential Societies, colleges where no STPs are installed) were found to be defunct and non-operational.
- (xi) The committee observed that there is a lack of awareness among the staff about the solid waste, bio-medical waste, e-waste and hazardous waste management rules.
- (xii) The type of waste collection bins and equipment used for collection and transfer of waste are not adequate. Mechanised equipment such as pull-cart trolleys, wheel trolleys are yet to be installed.
- (xiii) The committee has observed that sanitation conditions in public utilities such as Bus Terminals and local train stations are very poor and needs immediate attention.
- (xiv) On-site waste processing facilities such as bio-digesters, compost plants, vermicomposting plants etc.

5) Recommended action

Detailed reports of the 34 bulk waste generators inspected by the Sub-Committee –IV will be submitted along with other inspections planned in coming days. This committee has highlighted short-comings in each of the bulk waste generators inspected and proposed action taken for improving the existing practices for solid-waste and wastewater management as given here under:

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A) Considering the degree of non-compliances observed, the following set of actions proposed by this committee;

(i) DPCC may issue closure directions under section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 or Under Section 5 of the Environment (Protection) Act, 1986 for discharging untreated effluent in to open drain or sewer and poor solid waste management. Hon'ble NGT may kindly impose environmental compensation in respect of the following bulk-waste generators:

- a) Ginger Hotels, Vivek Vihar, East Delhi;
- b) Fraser Suites, Mayur Vihar Phase-I, Delhi;
- c) Golden Palm, Patparganj;
- d) Park Inn By Radison, Patpar Ganj;
- e) JP Hotel & Resort, Patpar ganj Ganj, IP Extension, Delhi;
- f) Golden Petal Hotel & Banquet, Shiv Puri, Geeta Colony; and
- g) Star City, Mayur Vihar Phase-I Extension

(ii) DPCC may issue show cause notice for closure under section 33 (A) of the Water (Prevention and Control of Pollution) Act, 1974 and Under Section 5 of the Environment (Protection) Act, 1986 for discharging untreated effluent in to open drain or sewer and poor solid waste management. Hon'ble NGT may kindly impose environmental compensation in respect of the following bulk-waste generators:

- a) V3S East Centre Mall, Lakshmi Nagar, District Centre, Delhi
- b) Cross River Mall (EPMS), Shahdara, Delhi
- c) Aggarwal Fun City Mall, Shahdara Ginger Hotels, Vivek Vihar, East Delhi;
- d) Park Plaza, Plot No. 32, CBD, Behind Kar Kar Duma Court, East Delhi.

(iii) DPCC may issue directions under section 33 (A) of the Water Act, 1974 or Under Section 5 of the Environment (Protection) Act, 1986 for discharging untreated effluent in to open drain or sewer and poor solid waste management and to install/ operate STP/ETP and for ensuring compliance to the concerned rules notified under the E (P) Act, 1986 in a time bound manner in respect of the following bulk-waste generators:

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- a) IG ESI Hospital, Jhil Mill Colony, E. Delhi;
- b) Swamy Dayanand Hospital , (Re-visit), Dilshad Garden, Delhi;
- c) Lal Bahadur Sastry Hospital Khichripur, Delhi;
- d) Chacha Nehru Bal Chikistalaya, Geetha Colony, Delhi;
- e) Dharamshila Cancer Hospital & Research Institute, Vasundhara Enclave, Delhi;
- f) Shahdara Railway Station, Delhi;
- g) Vivek Vihar Railway Station, Delhi;
- h) Anand Vihar ISBT, Delhi;
- i) Anand Vihar Railway Station, Delhi; and
- j) Shahdara Bus Terminal.

(iv) DPCC may issue a letter for ensuring further improvements in a time bound manner in case of the following bulk-waste generators and Hospitals:

- a) Max Super Speciality Hospital, Patparganj
- b) Dr. Hedgewar Arogya Samsthan. Near Kar Kar Duma Court, E.Delhi
- c) GTB Hospitals, Dilshad Garden, Delhi.
- d) Jag Pravesh Chandra Hospital, Shastri Park, Delhi.
- e) Holiday Inn, Mayur Vihar, Delhi.
- f) The Leela Ambience Convention Hotel, Surajmal
- g) Crown Plaza, Mayur Vihar
- h) DLF Galleria, Mayur Vihar Ph-I Extension
- i) Shaheed Sukhdev College of Business Studies, Vivek Vihar
- j) Vivekanand Mahila College, Vivek Vihar
- k) Shyam Lal College, Shahdara

B) General Recommendations

- (i) **Segregation at Source** – Every bulk waste generator should ensure segregation of solid waste generated in their premises. Two bin waste collection systems should be implemented for all sources of waste collection i.e. households, guest rooms, hospital wards, banquets, bus-terminals, railways stations etc. If required suitable notices / placards should be placed near bins to educate users.

- (ii) **Collection areas at Source of Generation**– Separate space with covered shed or room should be provided for storing the segregated waste generated from the premises of a bulk-waste generator. There should be arrangement for

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proper ventilation, provision for container washing, drainage for collection of wash water from storage space, etc. In case of hotels and commercial kitchens, installation of cold storage rooms may be considered as an option to control odour from stored putrescible material prior to collection and also to maintain better sanitary conditions. Further, storage area should have partitioned spaces or separate rakes or suitable bins to keep dry-waste, wet-waste, domestic-hazardous-waste, E-waste and used batteries.

- (iii) **Engaging authorised waste pickers** – Bulk-waste generators should ensure that waste pickers or waste collectors, the person or agency (vendors) engaged by them are authorised by local body or entity as defined under Rule 2 of Solid Waste Management Rules, 2016. Rules stipulates that such vendors shall be authorised to facilitate segregation, sorting and recovery of recyclables from various components of waste before the waste is delivered or taken up for its processing or disposal by authorised facilities (authorised by DPCC) or handed over to work force engaged by the local body for the purpose.
- (iv) **Training to ETP/STP operators** – Most of the operators of ETPs/STPs are not aware of the science and engineering of wastewater treatment. Bulk-waste generators should ensure that STP operators are given practical training by suitable agency or professional organisation.
- (v) **On-site vermicomposting / bio-digesting of organic waste** – Solid Waste Management Rules, 2016 stipulate that segregated bio-degradable waste shall be processed, treated and disposed-off through composting or bio-methanation within the premises as far as possible. Such compost facilities may be commissioned especially in 4 star hotels, 5 star hotels and large commercial kitchens such as banquet halls.
- (vi) **PPEs to the workers handling solid waste:** Necessary PPEs such as Gloves, face mask, gumboots, should be provided to all the works handling waste including operators of sewage treatment plant and compost plant.
- (vii) **Utilization of old landfill material for road construction** – A portion of solid waste (old digested material) dumped at Gazipur landfill site can be mined to retrieve sub-grade material for use in road construction.

Sd....

(Dr Rashid Hassan)

Chairman, Sub-Committee IV (EDMC Area)

Summary of Inspections with respect to Bulk-Waste Generators and Hospitals in EDMC

Annexure-I

S.No	Name of the Bulk Waste Generator/Hospital	Observations		Recommendations
	Hospitals	Measures Taken	Short-comings / Deficiencies	
(1)	Max Super Speciality Hospital, Patparganj No. of Beds : 400 BMW Generation : 406 kg/day WW Generation : 180 KLD Untreated WW : nil	(i) Segregation of bio-medical waste (BMW) is practiced as per BMWM Rules, 2016 (ii) Pre-treatment of BMW is practiced (iii) Temporary waste storage is provided. (iv) BMW is disposed through CBWTF located at Niloti. (v) Installed ETP and operating properly. Dual plumbing system exists.	(i) Bin system for MSW is not followed in accordance with the SWM Rules, 2016.	DPCC may issue letter to hospital to take up improvements w.r.t following: i. Bin system to be followed in accordance with the MSWM Rules, 2016 . ii. Regular training to the sanitary workers is organised by the Hospital.
(2)	Dr. Hedgewar Arogya Samsthan. Near Kar Kar Duma Court, E.Delhi No. of Beds : 200 BMW Generation : 140 kg/day WW Generation : 55 KLD Untreated WW : nil	(i) Segregation of bio-medical waste (BMW) is practised as per BMWM Rules, 2016. (ii) Pre-treatment of waste is done by autoclaving (iii) BMW is disposed through CBWTF located at Niloti. (iv) Installed STP	(i) STP needs proper operation and maintenance. (ii) Operator of STP requires training on O & M of STP.	DPCC may issue letter to hospital to take up improvements w.r.t following: i. Proper operation and maintenance of STP. ii. Two bin system to be followed for segregated collection of solid waste as per SWM Rules, 2016 .
(3)	IG ESI Hospital * Jhil Mill Colony, E. Delhi No. of Beds : 300 BMW Generation : 300 kg/day WW Generation : 60 KLD Untreated WW : 60 KLD	(i) BMW is disposed through CBWTF (ii) No ETP/STP installed (iii) 4 bin system exists	(i) Segregation of bio-medical waste (BMW) is not practised as per BMWM Rules, 2016. (ii) Bins are not labelled with Bio-hazard symbol (iii) No STP installed. (iv) Bins not adequate (v) Temporary waste storage area needs improvement (vi) No washing platform for bins/waste containers (vii) No pre-treatment of BMW is practiced. (viii) Electrical needle cutter is not in working condition (ix) Staff is not aware about BMWM Rules, 2016. (x) Housekeeping is very poor	DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points; - To comply with the provisions of BMWM Rules, 2016 and SWM Rules, 2016. - Improvement of segregation practices - Pre-treatment of lab waste - Installation of STP in a time bound manner. - Training to staff periodically on waste management aspect is essential. - Housekeeping requires improvement

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(4)	<p>GTB Hospitals, Dilshad Garden, Delhi.</p> <p>No. of Beds : 1500 BMW Generation : 1135 kg/day WW Generation : 640 KLD Untreated WW : nil</p>	<p>(i) BMW is disposed through CBWTF (ii) Separate colour coded bins exists (iii) STP installed (iv) Pre-treatment of BMW is practiced (v) Adequate waste storage facility (vi) ETB sludge is used as manure</p>	<p>(i) Segregation not done as per BMW Rules, 2016 (ii) Operation of STP requires improvement. (iii) Hypo fixer solution is sold to unauthorised recycler.</p>	<p>DPCC may direct the hospital for taking up the following;</p> <ul style="list-style-type: none"> - Training to STP operator - Training to staff on segregation - Installation of flow meters and maintenance of O&M records of STP. - Hyposolution is required to be sold only to the registered recycler
(5)	<p>Swamy Dayanand Hopsital (Re-visit), Dilshad Garden, Delhi</p> <p>No. of Beds : 390 BMW Generation : 370 kg/day WW Generation : 330 KLD Untreated WW : 330 KLD</p>	<p>(i) Member of a CBMWTF (ii) Segregation of bio-medical waste (BMW) is practiced as per BMW Rules, 2016 and still scope for improvement. (iii) Single bin system for Solid waste (iv) Pre-treatment for lab waste given (v) Solid waste picked by MCD (vi) Trolley used</p>	<p>(i) STP is not installed (ii) There is a scope for improvement of segregation. Bio-hazard symbol to be used on trolleys (iii) Solid waste not segregated (iv) Hypo fixer solution needs to be sold only to the registered recyclers. (v) 1 % Hypo solution is used for pre-treatment of waste (vi) Pre-treatment of lab waste to be done as per BMW Rules, 2016 (vii) Storage requires improvement</p>	<p>DPCC may direct the hospital for taking up the following;</p> <ul style="list-style-type: none"> - Installation of STP - Pre-treatment of BMW - Training to staff - Segregation of solid waste in bins in accordance with the SWM Rules, 2016.
(6)	<p>Jag Pravesh Chandra Hospital Shastri Park, Delhi.</p> <p>No. of Beds : 210 BMW Generation : 80 kg/day WW Generation : 90 KLD Untreated WW : 90 KLD</p>	<p>(iii) Bio-medical Waste is disposed off through CBMWTF located at Niloti (iv) STP Installed (v) Segregation of bio-medical waste (BMW) is practiced as per BMW Rules, 2016.</p>	<p>(i) Pre-treatment of lab waste not done (ii) STP not operated properly (iii) Needs improvement in segregation of Bio medical waste by way of training to staff. (iv) waste transfer records not maintained properly (v) Pre-treatment of waste is not practiced. (vi) Sludge generated from STP is not handled properly. (vii) Two bin system for solid waste not provided.</p>	<p>i. DPCC may direct the hospital for taking up the following;</p> <ul style="list-style-type: none"> - To operate and maintain STP properly. - Training to staff to improve further the disposal of bio medical waste into the bins specified as per BMW rules. - Segregation of solid waste into two bins i.e., wet and dry separately. - Pre-treatment of lab waste to be done.
(7)	<p>Lal Bahadur Sastry Hospital Khichripur, Delhi</p>	<p>(i) Member of CBMWTF (ii) STP installed. (iii) Partial Segregation of bio-medical waste</p>	<p>(i) Segregation of bio-medical waste (BMW) is not practised as per BMW Rules, 2016.</p>	<p>DPCC may direct the hospital for taking up the following;</p> <ul style="list-style-type: none"> - Segregation of bio-medical waste

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	<p>No. of Beds : 100 (200 % occupancy) BMW Generation : 70 kg/day WW Generation : 100 KLD Untreated WW : nil</p>	<p>(BMW) is practised.. (iv) Single bin system for Solid waste (v) Pre-treatment for lab waste given (vi) Solid waste picked by MCD (vii) Trolley used</p>	<p>(ii) No record shown for disposal of BMW. (iii) STP not operated properly. (iv) Collection and storage of sludge generative from STP not provided. (v) Shredder not working. (vi) Temporary waste storage area for BMW needs improvement. (vii) Two bin system for solid waste not provided. (viii) Very poor housekeeping.</p>	<p>(BMW) needs to be practised as per BMW/M Rules, 2016. - Needs proper record for disposal of BMW. - To operate and maintain STP properly. - Proper collection and storage of sludge generative from STP. - To put the shredder in operation. - Temporary waste storage area needs improvement. - Two bin system for solid waste needs to be practised. - Requires improvement in housekeeping.</p>
(8)	<p>Chacha Nehru Bal Chikistalaya Geetha Colony, Delhi</p> <p>No. of Beds : 220 BMW Generation : 110 kg/day WW Generation : 135 KLD Untreated WW : 135 KLD</p>	<p>(i) Member of CBMWTF (ii) STP installed. (iii) Segregation of bio-medical waste (BMW) is practised.. (iv) Single bin system for Solid waste (v) Pre-treatment for lab waste given (vi) Solid waste picked by MCD (vii) Single bin system for solid waste. (viii) Trolley used</p>	<p>(i) STP under renovation. (ii) Bin system for solid waste is not provided.</p>	<p>DPCC may direct the hospital for taking up the following; - To restore STP on priority basis, since untreated effluent being discharged directly into the sewer. - Bin system needs to be practised for MSW. - Training to staff for further improvement of disposal of Bio Medical Waste and MSW in accordance with Rules.</p>
(9)	<p>Dharamshila Cancer Hospital and Research Institute, Vasundhara Enclave, Delhi</p> <p>No. of Beds : 200 BMW Generation : 140 kg/day WW Generation : 100 KLD Untreated WW : 100 KLD</p>	<p>(i) Member of CBMWTF (ii) STP installed. (iii) Segregation of bio-medical waste (BMW) is practised. (iv) Single bin system for Solid waste (v) Trolley used</p>	<p>(i) Pre-treatment for lab waste is not given. (ii) Label for cytotoxic waste not provided (iii) STP is not operated properly. (iv) Collection and storage of sludge generated from STP is not provided. (v) Needles not destroyed properly and stored in open container. (vi) Lab chemicals used being</p>	<p>DPCC may direct the hospital for taking up the following; - Pre-treatment for lab waste. - Storage of BMW requires improvement w.r.to wash water collection provision. - Container washing facility - To operate and maintain STP. - Provision for collection and storage of sludge generative from STP needs to be provided.</p>

Summary of Inspections with respect to Bulk-Waste Generators and Hospitals in EDMC

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			<p>discharged directly without any pre-treatment.</p> <p>(vii) Two bin system for solid waste not provided.</p> <p>(viii) Bins washing not proper.</p>	<ul style="list-style-type: none"> - Shredders to be provided. - Two bin system for solid waste needs to be provided. - Improvement of bins washing area.
	Hotels			
(1)	<p>The Leela Ambience Convention Hotel, Surajmal</p> <p>No. of Rooms : 480 MSW Generation : 200 kg/day WW Generation : 460 KLD Untreated WW : nil</p>	<p>(i) Two bins system of segregation of municipal solid waste exists</p> <p>(ii) Segregation practices are satisfactory.</p> <p>(iii) Installed ETP and treated water is re-used for horticulture, cooling tower and toilet flushing.</p> <p>(iv) Dual plumbing system installed for reuse of treated wastewater.</p> <p>(v) Wet waste stored in cold room</p> <p>(vi) Compost plant installed</p>	<p>(i) There is a scope for further improvement in training/practices.</p> <p>(ii) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.</p> <p>(iii) Compost plant is not operated properly</p>	<p>DPCC may issue letter to implement following improvements;</p> <ul style="list-style-type: none"> - Bin system to be implemented in hotel rooms also - Regular training to kitchen and other staff - Proper operation of compost pant
(2)	<p>Ginger Hotels* Vivek Vihar, East Delhi</p> <p>No. of Rooms : 80 WW Generation : 28 KLD Untreated WW : 28 KLD</p>	<p>i. Single bin system for solid waste collection from all over the hotel</p> <p>ii. STP installed</p>	<p>(i) STP found to be defunct during visit.</p> <p>(ii) Segregation of municipal solid waste in accordance with SWM Rules, 2016 is not practiced.</p> <p>(iii) Mixed waste is collected in single bin against the SWM Rules, 2016.</p> <p>(iv) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.</p>	<p>DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points;</p> <ul style="list-style-type: none"> - Improvement of waste management practices as per SWM Rules, 2016 - proper operation and maintenance of STP - Installation of compost plant
(3)	<p>Park Plaza, Plot No. 32, CBD, Behind Kar Kar Duma Court, East Delhi.</p> <p>No. of Rooms : 90 MSW Generation : Not provided WW Generation : 56 KLD Untreated WW : nil</p>	<p>(i) STP installed and treated water is re-used for horticulture, cooling tower.</p>	<p>(i) STP is not operating properly.</p> <p>(ii) Needs improvement in waste segregation in two bins.</p> <p>(iii) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.</p> <p>(iv) No compost plant</p> <p>(v) Waste stored on floor but not in Bins within the temporary waste storage area.</p>	<p>DPCC may issue show-cause notice to ensure the following;</p> <ol style="list-style-type: none"> i. Improving operation of STP ii. Two bin system to be provided in rooms also iii. Training to staff on segregation iv. To install on-site compost plant

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(4)	<p>Golden Palm, Patparganj</p> <p>No. of Rooms : 50 MSW Generation : No records WW Generation : 30 KLD Untreated WW : 30 KLD</p>	<p>i. Two bin system for solid waste collection in kitchen and single bin in rooms. ii. STP installed</p>	<p>(i) Waste segregation not satisfactory. Storage bins overflowing. (ii) Solid waste collected in open without cover/shed (iii) STP installed but was not in operation. (iv) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices. (v) No compost plant</p>	<p>DPCC may issue show-cause notice to ensure the following;</p> <ul style="list-style-type: none"> - Improvement of waste management practices as per SWM Rules, 2016 - proper operation and maintenance of ETP - Installation of compost plant
(5)	<p>Lemon Tree Hotels, East Delhi Mall</p>	-	-	<p>This Hotel falls under the purview of the Uttar Pradesh State as per the proof shown by the hotel authorities.</p>
(6)	<p>Park Inn By Radison, Patpar Ganj</p> <p>No. of Rooms : 76 MSW Generation : 30 Kg/day WW Generation : 20 KLD Untreated WW : 20 KLD</p>	<p>(i) Two bin system for waste collection in kitchen. (ii) Installed STP (iii) Solid waste is given to vendor (iv) Provided waste collection room (v) E-waste is sold to the e-waste recycler</p>	<p>(i) Segregation of waste not done properly in two bin system. (ii) STP found defunct (iii) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices. (iv) Compost plant does not exist</p>	<p>DPCC may issue show-cause notice to ensure the following;</p> <ul style="list-style-type: none"> - Improvement of waste management practices as per SWM Rules, 2016 - proper operation and maintenance of STP - Installation of compost plant
(7)	<p>JP Hotel & Resort PP Ganj, IP Extension, Delhi</p> <p>No. of Rooms : 50 MSW Generation : 35 Kg/day WW Generation : 16 KLD Untreated WW : 16 KLD</p>	<p>(i) Single bin system for waste collection. (ii) Installed STP (iii) Solid waste is given to vendor</p>	<p>(i) Segregation of waste not done properly in two bin system. (ii) STP not operating properly (iii) Solid waste stored in open without cover/ shed (iv) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices. (v) Compost plant does not exist</p>	<p>DPCC may take action against the unit to ensure;</p> <ul style="list-style-type: none"> - Improvement of waste management practices as per SWM Rules, 2016 - proper operation and maintenance of ETP - Installation of compost plant
(8)	<p>Holiday Inn, Mayur Vihar, Delhi.</p> <p>No. of Rooms : 190</p>	<p>(i) Two bins system of segregation of solid waste exists for all areas except guest rooms. Segregation practices were satisfactory.</p>	<p>(i) There is a scope for further improvement in training/practices for segregation of solid waste. (ii) Solid waste is given to vendor,</p>	<p>Best waste management practices among the hotels in East Delhi area. However, DPCC may issue letter for following improvements;</p>

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	MSW Generation : 450kg/day WW Generation : 120 KLD Untreated WW : nil	(ii) Installed STP and operating satisfactorily. Disinfection done by UV lamp system. (iii) Dual plumbing system installed for reuse of treated wastewater for flushing. (iv) Solid waste is given to vendor for final disposal (v) Wet waste is stored in cold room (vi) Vermi-Compost plant installed for converting food & veg. waste into manure and operating satisfactorily. Manure is used for gardening (vii) Cold room for wet waste storage	without knowing their permits/authorisation from EDMC and their final disposal practices.	- Bin system to be implemented in hotel rooms also - Regular training to be given to kitchen and other sanitary staff
(9)	Crown Plaza, Mayur Vihar, Delhi. No. of Rooms : 160 MSW Generation ; 400 Kg/day WW Generation : 80 KLD Untreated WW : nil	(i) Two bins system of segregation of solid waste exists for all areas except guest rooms. (ii) Installed ETP (iii) Dual plumbing system installed for reuse of treated wastewater. (iv) Solid waste is given to vendor (v) Wet waste stored in cold room (vi) Vermi-Compost plant installed (vii) Dual plumbing system exists and treated water used in flushing (viii) Cold room for wet waste storage	(i) Segregation of waste is not practiced. (ii) There is a scope for further improvement in training/practices for segregation of solid waste. (iii) Operation of EPT needs improvement (iv) House-keeping around compost plant needs improvement (v) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.	DPCC may issue letter for following improvements; - Waste management practices needs improvement in accordance with the SWM Rules, 2016 - Bin system to be implemented in hotel rooms also - Regular training to the kitchen and STP and other staff is required
(10)	Fraser Suites* Mayur Vihar Phase-I, Delhi No. of Rooms : 90 MSW Generation : 50 kg/day WW Generation : 40 KLD Untreated WW : 40 KLD	(i) Single bin systems in all areas including guest rooms. (ii) Solid waste is given to vendor (iii) Waste storage room provided	(i) Segregation of waste was not practiced as per SWM Rules, 2016. (ii) Wastewater was being by-passed without treatment. (iii) STP was under maintenance (iv) No compost plant (v) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.	DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points; - Improvement of waste management practices as per SWM Rules, 2016 - STP is required to be restored in a time bound manner. - Proper operation and maintenance of STP is required by giving training to the concerned staff - Installation of compost plant
(11)	Golden Petal Hotel & Banquet	Only 15 Rooms with Banquet Hall	(i) Segregation of waste is not	Best waste management practices are

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	<p>Shiv Puri, Geeta Colony</p> <p>No. of Rooms : 15 MSW Generation : 80 kg/day WW Generation : no record Untreated WW : no record</p>		<p>practiced as per SWM Rules, 2016.</p> <p>(ii) No temporary solid waste storage provision made</p> <p>(iii) Solid waste is conveyed in trolley and disposed off in near by Dhalao.</p> <p>(iv) Sewage generated is directly discharged into open drain.</p>	<p>not being followed . However, DPCC may issue letter for following improvements;</p> <ul style="list-style-type: none"> - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers is required to be organised by Hotel Authority.
	Colleges			
(1)	<p>Shaheed Sukhdev College of Business Studies, Vivek Vihar</p> <p>No. of Students: : 1200 MSW Generation : 30 kg/day WW Generation : 100 KLD Untreated WW : 100KLD</p>	i) Hostel is not attached with the College.	<p>i) Segregation of waste is not practiced as per SWM Rules, 2016.</p> <p>ii) No temporary waste storage provision.</p> <p>iii) Solid waste is conveyed in trolley and disposed off in near by Dhalao.</p> <p>iv) Sewage generated is directly discharged into open drain.</p>	<p>Waste management practices are not being followed . However, DPCC may issue letter for following improvements;</p> <ul style="list-style-type: none"> - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers is required to be organised by college.
(2)	<p>Vivekanand Mahila College Vivek Vihar</p> <p>No. of Students: : 2200 MSW Generation : 100 kg/day WW Generation : 20 KLD Untreated WW : 20 KLD</p>	i) Hostel is not attached with the College	<p>(i) Segregation of waste is not practiced as per SWM Rules, 2016.</p> <p>(ii) Vermi compost provision is made but requires improvement.</p> <p>(iii) No designated waste storage provision for temporary waste storage.</p> <p>(iv) Solid waste is conveyed in a trolley and disposed off in near by Dhalao.</p> <p>(v) Sewage generated is directly discharged into drain.</p>	<p>Waste management practices are not being followed . However, DPCC may issue letter for following improvements;</p> <ul style="list-style-type: none"> - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers is required to be organised by college
(3)	<p>Shyam Lal College, Shahdara</p> <p>No. of Students: : 6000 MSW Generation : 140 kg/day WW Generation : 90 KLD Untreated WW : 90 KLD</p>	<p>i) Hostel is not attached with the College.</p> <p>ii) Paper waste is segregated and fresh paper is obtained from the vendor.</p>	<p>i) Segregation of waste is not practiced as per MSWM Rules, 2016.</p> <p>ii) No temporary waste storage provision.</p> <p>iii) Solid waste is disposed off in near by Dhalao.</p> <p>iv) Sewage generated is collected in a</p>	<p>Waste management practices are not being followed . However, DPCC may issue letter for following improvements;</p> <ul style="list-style-type: none"> - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary

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			tank and then pumped directly into open drain.	workers is required to be organised by college.
	Mall			
(1)	V3S East Centre Mall, Lakshmi Nagar, District Centre, Delhi No. of Shops : 180 MSW Generation : 120 kg/day WW Generation : 160 KLD Untreated WW : nil	(i) Single bin system for collection of waste at shops, corridors (ii) Partial segregation practices were satisfactory. (iii) Installed compost plant (iv) Installed STP and treated water is re-used. (v) Solid waste is given to vendor.	(i) Installed STP but needs proper maintenance. Operator of STP requires training. (ii) No public litter bins (iii) Storage of Solid waste is not proper and causing foul smell. (iv) Compost plant is not working properly. (v) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices.	DPCC may issue directions for time bound improvement with respect to following action points; - Improvement of waste management practices as per SWM Rules, 2016 in corridors and restaurants. - Proper operation of STP - Proper storage of waste with wash water collection provision - Training for proper operation and maintenance of STP - Sludge disposal
(2)	Cross River Mall (EPMS), Shahdara, Delhi No. of Shops : 120 MSW Generation : 950 kg/day WW Generation : 52 KLD Untreated WW : nil	(i) Single bin system for collection of waste at shops, corridors (ii) Partial segregation practices. (iii) Temporary waste storage area. (iv) Installed STP. (v) Solid waste is given to vendor. (vi) Manual waste transfer to temporary collection area.	(i) Installed STP but not operating properly. (ii) Inadequate public litter bins (iii) Solid waste is given to vendor, without knowing their permits/authorisation from EDMC and their final disposal practices. (iv) No trolley for solid waste waste collection. (v) Sewage is discharged in storm water drain.	DPCC may issue directions for time bound improvement with respect to following action points; - Improvement of waste management practices as per SWM Rules, 2016. - Proper operation and maintenance of STP. - Needs pull cart / trolley for waste transfer to temporary collection area.
(3)	Aggarwal Fun City Mall, Shahdara No. of Shops : 4 shops /2500 visitors MSW Generation : 400 kg/day WW Generation : 32 KLD Untreated WW : nil	i) STP provided and treated water is reused for gardening and cooling	i) Segregation of waste is not practiced as per SWM Rules, 2016. ii) MSW is stored in temporary waste storage area and no access control. iii) Solid waste is disposed off nearby Dhalao through vendor. iv) Sewage generated is treated and then reused for gardening and cooling.	DPCC may issue directions for time bound improvement with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers and STP operator is required to be organised by Mall authority.
(4)	DLG Galleria, Mayur Vihar Ph-I Extension	Installed STP	i) Segregation of waste is not practiced as per SWM Rules, 2016.	DPCC may issue directions for time bound improvement with respect to

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	No. of Shops : 113/ 12,000 visitors MSW Generation : 175 kg/day WW Generation : 40 KLD Untreated WW : nil		ii) MSW is stored in temporary restricted waste storage area. iii) Solid waste is disposed off nearby Dhalao through vendor. iv) Sewage generated is treated and then reused for gardening and cooling.	following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers and STP operator is required to be organised by Mall authority.
(5)	Star City, Mayur Vihar Ph-I Extension No. of Shops : 30 shops MSW Generation : 250 kg/day WW Generation : 25 KLD Untreated WW : 25 KLD	Installed STP	i) Segregation of waste is not practiced as per MSWM Rules, 2016. ii) MSW is stored in open waste storage area. No access control. iii) Solid waste is disposed off nearby Dhalao through vendor. iv) STP was not in operation during the visit. Sewage generated is treated batch-wise.	DPCC may issue directions for time bound improvement with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Regular training to the sanitary workers and STP operator is required to be organised by Mall authority.
	Railway Stations			
(1)	Shahdara Railway Station* No. of trains : 200 No. of Passengers: 25000 MSW Generation : 800 kg/day WW Generation : 200 KLD Untreated WW : 200 KLD	-	(i) Segregation of waste is not practiced as per SWM Rules, 2016. (ii) All the collected MSW is collected and disposed off in open area (iii) All the rodents and animals are having access to the MSW presently stored improperly under the bridge. v) Solid waste is conveyed and disposed off in near by Dhalao through vendor. vi) Sewage generated is disposed directly into sewer. vii) Housekeeping is very poor.	DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Upgradation of sanitary conditions - Regular training to the sanitary workers is required to be organised by the Indian railways.
(2)	Vivek Vihar Railway Station* No. of trains : 30 No. of Passengers: 1200 MSW Generation : no record WW Generation : No record	-	i) Segregation of waste is not practiced as per SWM Rules, 2016. ii) All the MSW is collected and disposed off in open area iii) All the rodents and animals are having access to the MSW.	DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules,

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	(one t/well) Untreated WW : nil		iv) Sewage generated is disposed directly into sewer. viii) Housekeeping is very poor.	2016. - Upgradation of sanitary conditions - Regular training to the sanitary workers is required to be organised by the Indian railways.
(3)	Anand Vihar Railway Station No. of trains : 20 No. of Passengers: 600000 MSW Generation : 2 TPD WW Generation : 100 KLD Untreated WW : 100 KLD	i) House keeping is good. ii) Plastics and Glass is segregated through 'chintan' and disposed off for recycling. iii) Installed STP for treatment of generated sewage.	(iv) Segregation of waste is not practiced as per SWM Rules, 2016. (v) Open type of temporary waste storage provision is made and only wet waste is stored. No access control. (vi) Solid waste is conveyed and disposed off in Ghazipur through vendor. (vii) STP is not operated properly and untreated sewage is discharged.	DPCC may issue letter to Indian Railways for following improvements; - Two Bin system and other necessary provisions to be implemented in accordance with the SWM Rules, 2016. - Upgradation of sanitary conditions - Regular training to the sanitary workers is required to be organised by the Indian railways. - Proper operation of STP
Bus Terminals				
(1)	Anand Vihar ISBT * No. of buses : 3000 No. of Passengers: 152000 MSW Generation : 1 TPD WW Generation : 24 KLD Untreated WW : 24 KLD	-	i) Segregation of waste is not practiced as per SWM Rules, 2016. ii) Temporary waste storage provision for temporary waste storage is provided but waste collected is stored in open area. No access control. iii) Adequate litter bins not provided iv) Solid waste is conveyed and disposed off in Ghazipur Landfill site by vendor. v) No adequate public toilets vi) Housekeeping is very poor	DPCC may issue show-cause notice for closure to ensure compliance with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Upgradation of sanitary conditions - Regular training to the sanitary workers is required to be organised by the DTC to improve waste management and housekeeping.
(2)	Shahdara Bus Terminal No. of buses : 200 No. of Passengers: 10000 MSW Generation : WW Generation : nil Untreated WW : nil	-	i) Segregation of waste is not practiced as per SWM Rules, 2016. ii) No designated waste storage provision for temporary waste storage. iii) Adequate litter bins not provided iv) Solid waste is conveyed in a trolley and disposed off in nearby Dhalao.	DPCC may issue directions for time bound improvement with respect to following action points; - Bin system and other necessary provision to be implemented in accordance with the SWM Rules, 2016. - Upgradation of sanitary conditions

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			v) Sewage generated is collected in a tank and then pumped directly into open drain.	- Regular training to the sanitary workers is required to be organised by the DTC to improve waste management and housekeeping.
	Waste to Energy Plant Ghazipur (12 MW capacity) Average – 8 MW generation	i) MSW permitted processing capacity: 1300 TPD. ii) Energy production about 8.75 MW from MSW against 12 MW capacity. iii) Mechanical segregation facility is provided iv) Installed ETP for leachate treatment. v) Installed APCD comprising of reactor followed by bag filter to achieve emission standards of DPCC	i) Improper segregated waste is received by the facility. ii) Ash is disposed off for brick making, cement kiln.	i) Enhancement of capacity is essential for entire waste generated from EDMC area.

Note: * - These 06 Bulk Generators are not having requisite systems for ensuring management of waste generated and therefore liable for levying penalty.