

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI**

O.A. NO. 199 of 2021 (SZ)

IN THE MATTER OF:

Sri. Shankar Narayanan Bala Krishnan,
Telangana and Ors

...Applicant(s)

Versus

State of Telangana and Ors

...Respondents(s)

I N D E X

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Place: Hyderabad

Date: 17 .12.2022

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REPORT FILED ON BEHALF OF RESPONDENT NO.6

I, D.S. Lokesh Kumar S/o. Sri. Somaraju, aged about 44 years, Occ: Commissioner, Greater Hyderabad Municipal Corporation, Greater Hyderabad Municipal Corporation, R/o. Hyderabad, do hereby solemnly swear and state on oath as follows:

1. It is respectfully submitted that, I am working as Commissioner of Greater Hyderabad Municipal Corporation (GHMC), Hyderabad. As such, I am well acquainted with the facts of the case. Further, I am deposing this report in view of the order dated:24.11.2022 of the Hon'ble National Green Tribunal, South Zone in OA No. 199 of 2021 based on the records available with the Respondent Corporation.

2. Placing on record the details of all the earlier status reports filed by the 6th Respondent before the Hon'ble National Green Tribunal, Southern Zone, Chennai.

- Report filed by the 6th Respondent, dated 07.10.2021
- Report filed by the 6th Respondent, dated 07.12.2021
- Report filed by the 6th Respondent, dated 05.03.2022
- Report filed by the 6th Respondent, dated 29.03.2022




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- Additional Report filed by the 6th Respondent, dated 25.08.2022
- Reply memo filed by the 6th Respondent, dated 25.08.2022
- Status report filed by the 6th Respondent, dated 23.11.2022

3. Brief details of Jawahar Nagar Site:

Total extent of Land: 339 acres

Usage before 2012: Entire 339 acres was used for open dumping

Usage after 2012: 214 acres reclaimed & MSW Processing Facility set up
125 acres used for old dump capping

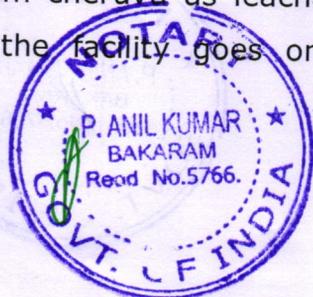
% of Land reclamation: 214 out of 339 acres (63.13%)

4. It is respectfully submitted that, a total of 3,700 - 4,000 metric tons of waste (MSW) coming to the Jawahar Nagar is planned for diversion to 3 alternate sites in two phases - **Phase-I:** 1,000 metric tons will commence immediately after the commissioning of 14.50 MW WTE plant at Dundigal which is planned to commence from 15.03.2022. **Phase-II:** 2,700 metric tons of waste will be diverted in about one year time by completing the other two projects which are ready for grounding. As such, about 2/3rd of the total MSW presently coming to the Jawahar Nagar will be diverted within one year. GHMC is committed to explore the possibilities of identifying another alternate site suitable for establishing MSW facilities so as to reduce further inflow of MSW to Jawahar Nagar facility.

5. **Malkaram Cheruvu:** Located adjacent to the capped legacy dump and Jawahar Nagar MSW facility.

- In respect of leachate in the Malkaram Cheruvu, it is respectfully submitted that, GHMC has already ensured to arrest flow of any leachate into Malkaram cheruvu as leachate generated from daily waste processed in the facility goes only to the Waste Water

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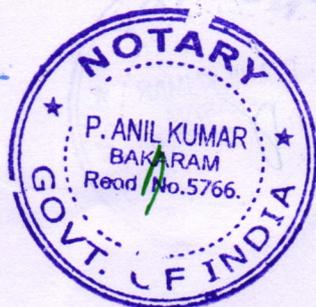



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Treatment Plant in MSW facility operated by HIMSW (**Photographs enclosed as Annexure I**). Further, the storm water from the processing facility as well as the capped legacy dumpsite is also not allowed to enter into Malkaram cheruvu as construction of diversion channels (garland drain) and other storm water network are 100% completed (**Photographs enclosed as Annexure II**).

- It is respectfully submitted that, in addition to the treatment and disposal of leachate generated from daily waste in the MSW facility within the MSW facility using 2 stage Reverse Osmosis (R.O) system, followed by Multiple Effect Evaporator (MEE) and Agitated Thin Film Dryer (ATFD) systems, GHMC has taken up first of it's kind project in India for Comprehensive Treatment of Legacy Leachate to clear entire legacy leachate impounded in the Malkaram tank and other artificial ponds adjacent to the legacy dumpsite. This project is exclusively taken up to clean up Malkaram Cheruvu and thereby reduce the problem of ground water pollution. Agreement for the project of "Treatment & Disposal of legacy leachate until Restoration & Stabilization of ponds adjacent to IMSWM plant at Jawaharnagar" was concluded with the L1 bidder M/s. Ramky Infrastructure Ltd on 02.09.2021 with approved project cost of Rs.251.016 Cr. The scope of this project includes - complete treatment and disposal of legacy leachate from Malkaram tank and other artificial ponds in (02) years, restoration and stabilization of Malkaram tank in the subsequent (03) years. Further, in case the stabilization (rejuvenation) of Malkaram Cheruvu is not achieved within (03) years, the obligation of restoration of the lake to it's natural status rests with the Concessionaire under Extended Operations period which shall extend upto 10 years. The Concessionaire has started the trial testing of the MVRE technology

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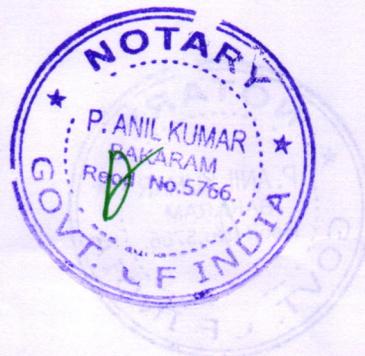
treatment plant on 10.07.2022 and has commissioned the plant with 2000 kLD capacity from 21.10.2022. It is envisaged to complete the treatment of the Malkaram tank before onset of monsoon 2023. Further, to prevent the incident rainfall from mixing with the leachate in Malkaram tank HDPE floats were placed and rain water collected in the floats is pumped out at regular intervals (**Photographs enclosed as Annexure III**).

6. Action taken Report:

In respect of the show-cause notice issued by the TSPCB on 23.05.2020 on non-compliance of some of the directions issued by the Board, it is respectfully submitted that, the GHMC and the facility management have complied all the directions issued by the TSPCB from time to time. The summary of the Action Taken is as submitted below:

S.No	Directions	Compliance
1	The facility shall comply with all the CFO conditions issued by the Board.	The facility is complying with the CFO conditions.
	The facility shall ensure that the waste shall not be stored openly. All the waste shall be covered with tarpaulin sheet	The facility is covering the MSW stored in the premises with soil / tarpaulin sheets. Only active area has been left open for receipt of waste. The facility has provided closed shed for windrow composting yard and provided bio enzymes & odor neutralizing spray misting lines at the tipping floor and Windrow composting yard. as per directions of the Board.

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2	The facility shall continuously spray the smell absorbent chemicals like Bio enzymes & odor neutralizing solutions in the dump yard area frequently as a measure to arrest smell nuisance.	The facility provided bio enzymes & odor neutralizing spray misting lines at the tipping floor and Windrow composting yard. The facility is also using drones for spraying the odour neutralizing liquids on the composting yards and on the leachate storage ponds.
3	The facility shall provide shed to the additional bio-composting plant which is being used for windrow composting within one month.	The facility has provided additional closed shed for windrow composting yard.
4	The facility shall ensure that the vehicles carrying waste does not ply from the colony/ gated community roads.	Being Complied and vehicles are diverted from colony/ gated community roads
5	Pre-process and post-process rejects shall be removed from the processing facility on regular basis and shall not be allowed to pile at the site. Recyclables shall be routed through appropriate vendors. The non-recyclables shall be sent for well designed landfill site(s).	The facility is carrying out pre-processing of the MSW into bio-composting, RDF and rejects. The wet waste is bio-composed through windrow composting, the RDF generated is used as fuel in the waste to energy plant (24 MW) and the non-recyclables are sent to sanitary landfill site located within the premises.
6	The facility shall divert storm water drains to minimize leachate generation and prevent pollution of surface water and also for avoiding flooding and creation of marshy conditions.	The facility has provided separate system for collection of storm water and leachate water in the processing facility. Process leachate drains are connected to the LTP for treatment. For the landfill the facility has taken measures to divert the surface

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		water run-off away from the leachate network.
7	The facility shall pass the gas through gas scrubbers to eliminate the H2S gas and shall operate flaring system to flare the gas generated.	Flaring system has been provided to flare all the gases generated from the Landfill. For better utilisation of of landfill Gas the facility has established a Compressed Bio Gas (CBG) plant of 750 cubic meter per hour input capacity for producing CBG by cleaning, enrichment and bottling the landfill gas as alternative to CNG fuel.
8	The facility shall continuously operate MEE & ATFD to treat the RO rejects from the leachate treatment plant.	The facility has provided Leachate Treatment Plant of capacity 600 KLD followed by double stage Reverse Osmosis system of capacity 300 KLD and 150 KLD. The facility has provided MEE of capacity 150 KLD and ATFD of capacity 45 KLD to treat the RO rejects from the LTP. The facility is continuously operating the MEE and ATFD.
9	The facility shall not accept the waste generated from the slaughter houses.	No waste from slaughter houses is being accepted
10	The facility shall regularly operate gas collection and flaring/utilization system so as to avoid spreading of gases in the surrounding areas	The gases generated from the landfill are collected and passed through CBG facility for collection and purification.
11	The industry shall provide water flow meters for recording	The facility has provided water flow meters at composting plant, RDF

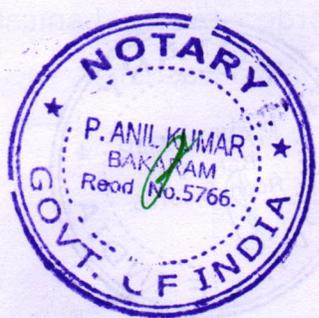
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	daily water consumption for composting plant, RDF plant, recycling complex, floor wash and vehicle wash etc.,	plant, Re-cycling complex, floor wash etc., and furnishing the records.
12	The facility shall ensure that no leachate from the processing area of fresh waste joins legacy leachate.	The facility has connected all process areas with leachate collection system to collect the leachate from the fresh waste. Landfill & RDF storage are connected with the sumps to collect the leachate from the respective areas. Leachate from all these areas were pumped to the storage ponds located east side of the CBG plant, from where the leachate is then pumped to the waste water complex for further treatment.
13	The facility shall explore the possibility of providing conveyor belts to transport RDF to Waste to Energy Plant from the processing area to avoid vehicular movement.	The facility has informed that they are exploring the possibility of RDF conveyor system along with the Phase - II works.
14	The landfill sites shall have waste inspection facility to monitor wastes brought in for landfill, office facility for record keeping and shelter for keeping equipment and machinery including pollution monitoring equipments.	The facility has waste inspection facility at the 4 weigh bridges at entrance gate for the incoming waste and at 5 th weighbridge for process rejects reaching the SLF. The inspection is done with the help of CC cameras at the weigh bridges. The operational records are maintained at the operations building and keeping in safe

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		<p>possession of EPTRI who is the Independent Engineer for the project.</p> <p>The facility has full pledged laboratory with adequate air monitoring and waste characterisation facilities. Waste characterisation is done on monthly basis and reports are shared with the Independent engineer and GHMC</p>
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It is further submitted that, ever since 18.02.2012, the date on which the Commercial Operations have started in the MSW processing facility established in the then existing open dumpsite, by relocating the entire unprocessed waste spread all over the site of 339 acres to a minimum footprint of 125 acres till date, the daily generated MSW is being treated and disposed off strictly as per Solid Waste Management Rules. Despite Jawahar Nagar being the only facility handling entire city waste properly and in scientific manner, daily waste is properly processed by recovering biodegradable waste for conversion into city compost, non-biodegradable into Refuse Derived Fuel (RDF) for co-processing in cement plants and/ or Waste to Energy projects. In any case, not more than 15% to 18% of inert materials are being diverted to scientific landfill constructed as per SWM Rules. As such, there is no open dumping happening in Jawahar Nagar since February 2012. Following are the key activities carried out at the integrated MSW facility:

- i. Pre-sorting: The MSW from Tipping Floor is transported to the Pre-sorting area for processing at shaft less rotary screens called as trommels in order to mechanically segregate the waste into organic & inorganic fractions. The undersized materials i.e. less




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than 70 mm in size which will predominantly be compostable material are transported to composting pad. Oversized material will pass through a sorting belt where recyclables like plastics, glass bottles, etc and big sized inerts like stones will be handpicked manually. Rest of the material will pass through a magnetic separator where ferrous material will be separated and the balance material which is predominantly inorganic fraction is considered as Refuse Derived Fuel (RDF).

ii. Composting Section: The composting section comprises of (02) processes:

a) Biological Process: The segregated organic fraction of the MSW is moved to windrow area where the waste is rearranged into trapezoidal heaps, is sprayed with EM culture (aerobic microbes) and undergoes turning operations (for the purpose of aeration) to help decomposition and formation of compost. The process of aerobic decomposition is adopted here in view of it having less cycle time, no generation of odorous methane and hydrogen sulphide, eradication of harmful pathogens and weeds in view of exothermic nature of the process.

b) Mechanical Process: Subsequently, the material from composting pad is screened through 20 mm and 4 mm diameter holed trommels. The undersized material is compost which is enriched using biological media if needed. Sand is separated using a specific gravity separator. The compost so obtained is packed and marketed. The oversized material goes to RDF section for screening.

iii. RDF Section: The RDF obtained from presorting is sent to the Waste to Energy Plant operational at the site. Based on requirement from other consumers of RDF such as cement

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industries, the RDF from pre segregation/ pre-sorting section is passed through magnetic separator and thereafter through a shredder for size reduction up to 15 mm in size. Further, it is passed through a screen of 15mm size to remove fine sand and silt which are not combustible. The end product is made into Briquettes which can be used as alternate fuel. The Excess quantity of RDF generated is stored for future use.

- iv. Waste to Energy: The segregated inorganic fraction (Refuse Derived Fuel- RDF) of about 1350 tons per day is used as fuel in the 24 MW Waste to Energy Plant established at the site. The plant operates with reciprocating grate technology. It started operation in August 2020 and has generated 363.06 MU of electricity by consuming 10.64 lakh tons of RDF till November 2022.
- v. Scientific/ Sanitary Landfill: The rejects/ inerts of the treatment process are disposed in scientific landfill. This landfill is constructed as per SWM Rules 2016 and CPHEEO manual wherein the bottom liner consists of 90cm thick compacted clay, 1.5mm thick HDPE geo-membrane & a drainage layer of 300 mm thick granular material and the final cover consists of vegetative layer of 450 mm thick clay, barrier layer of 600 mm thick clay & gas venting layer of 450 mm thick granular material. Further, leachate collection & landfill gas collection network is also provided in this landfill.
- vi. 1 MW Roof Top Solar Energy Plant: 1 MW Solar Energy Plant is established by placing the solar panels on the presorting sheds. The electricity generated is for captive usage.
- vii. Vehicle Maintenance Area: The vehicles being operated by the Concessionaire for transportation of MSW from source to the MSW treatment facility and vehicles operated for T&D facility are



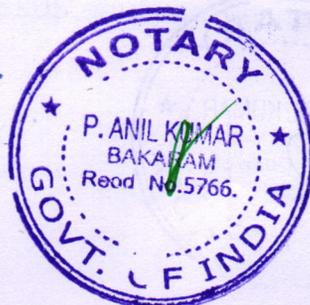

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regularly maintained and cleaned at the Vehicle Maintenance Area established at the facility. Since 2021, the open tippers which were used to transport MSW are being replaced by hook mounted vehicles coupled with hermetically sealed containers for transportation of MSW in closed manner and in phases manner.

- viii. Plastic Waste Recycling Facility: 20 TPD Plastic Waste recycling facility established in 2013 is operational at this integrated facility. The recyclable plastics are segregated, washed and processed into bags for usage as disposal bags for biomedical waste.
- ix. Compressed Biogas plant: To utilize the landfill gas generated from the capped legacy waste dump, a 750 cum per hour input capacity CBG plant is operational since October 2021. The gas generated from the capped site is transported to the CBG plant using a common header line and after processing it is bottled and sold to Bhagyanagar Gas Ltd under SATAT scheme.
- x. Waste Water Complex: The leachate generated during the waste treatment process i.e., from Compost pad, RDF storage, Sanitary landfill, Capped area, MSW pit of WTE is collected at a common leachate collection sump. The leachate thus collected is pre treated at a 1000 kLD capacity plant established in the site and subsequently treated in the 600 kLD- Reverse Osmosis System. The rejects from the RO process are treated at the 150 kLD MEE-45 kLD ATFD system. The permeate is used for maintaining the greenery in the site and the reject which is in the form of solid (only about 10% moisture) is disposed in the scientific landfill.
- xi. Laboratory: An in-house laboratory is established inside the facility for preparation of em-cultures, collecting-storing & analyzing


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leachate samples, air quality analysis, performing waste characterization studies etc.

7. **Alternative Solid Waste Management facilities:** It is respectfully submitted that, GHMC has made all efforts for diverting about 3,700 - 4,000 metric tons of waste (MSW) coming to the Jawahar Nagar Facility by establishing MSW facilities in 3 alternative sites, the details of which are as submitted below:

i. Dundigal (V), Medchal Malkajgiri (D): Construction of 14.50 MW capacity Waste to Energy plant is taking place at this site which is at 95% completed stage. Diversion of 1000 tons of MSW/ RDF per day from Jawahar Nagar site is planned to commence from March 2023 **(photographs enclosed as Annexure IV).**

ii. Pyaranagar (V), Sangareddy (D): After the Ministry of Environment Forest & Climate Change has accorded Stage-I approval on 05.05.2022 for diversion of 0.6228 ha of forest land in the Nallavelly Reserve Forest for formation of approach road to this site, GHMC has completed all compliance criteria and submitted compliance report to the District Forest Officer on 29.11.2022. Application for Consent for Establishment (CFE) with MSW handling capacity of 4,000 TPD was submitted to TSPCB on 13.12.2022. **(CFE Application enclosed as Annexure V).**

It is proposed to start the MSW processing facility of 2,000 TPD in first phase with following facilities:-

- (i) Raw Biogas of 130 tons per day capacity
- (ii) Plastic Recycling facility of 45 tons per day capacity.
- (iii) Compost facility of 100 tons per day and
- (iv) RDF facility of 1000 tons per day capacity with a target

date to commence from June 2023.




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It is planned to double the above capacities along with 15 MW Waste to Energy project in second phase by June 2024.

iii. Yacharam: 700 tons of MSW per day will be diverted here from Jawahar Nagar after the construction of proposed 12 MW capacity Waste to Energy project through M/s Sri Venkateshwara Green Power Projects Ltd which is expected to be completed by February 2024. Although CFE was granted by TSPCB on 11.03.2020 the project got delayed due to the issues faced by the agency in financial closure and their request for granting permission for enhancement of the project capacity from 12 MW to 14 MW for the reason of financial viability. At present, the request is under the consideration of the Government of Telangana.

As such, a detailed report on the action taken and action to be taken along with timelines on each of the alternative sites is submitted as below:

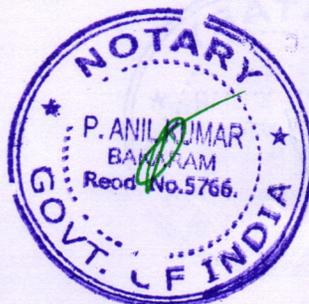
A. Action taken and action to be taken on the alternative sites for Treatment and Disposal of Municipal Solid Waste in GHMC:

i. Dundigal:

Action taken so far:

- Consent for Establishment (CFE) was obtained from TSPCB on 01.07.2020.
- Construction of civil works started on 24.01.2021. Major civil works such as RDF pit, TG Building, Ash Pit, ACC Building, Chimney, Boiler & FGCS are completed.
- Erection of electro mechanical works such as Boiler grate, boiler drum, FGCS structure, Reactor tower & Bag filter, ACC, DM Water Tank, ACT, TG Building, EOT Crane are completed.
- Grid Connectivity Approval was obtained on 30.04.2022
- Boiler Hydro Test completed on 29.08.2022
- Electrical Switchyard, TG Erection are at the completion stage.

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Action to be taken:

Sl. No	Item/ Activity	Time line
1	Refractory Dry Out	27.12.2022
2	Alkali Boil Out	31.01.2023
3	Back Charging	07.03.2023
4	Steam Blowing	10.03.2023
5	Synchronisation & Commissioning of plant	15.03.2023

ii. Pyaranagar:**Action taken so far:**

- Request for diversion of 0.6228 ha of forest land from MoEF&CC, GoI was made on 17.06.2020
- Stage-I approval for diversion of forest land was granted on 05.05.2022
- Land License agreement entered with Concessionaire on 17.11.2022
- Compliance submitted to Stage I approval on 29.11.2022
- Application for CFE submitted to TSPCB on 13.12.2022

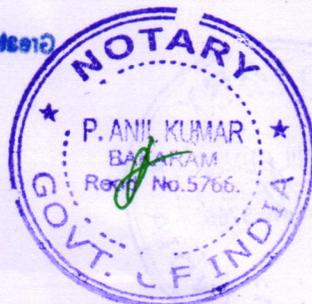
Action to be taken:

SI No	Item/ Activity	Time line
1	Granting of CFE by TSPCB	05.01.2023
2	Approach road works	05.02.2023
4	Phase-I Construction works	15.02.2023
5	Commercial Operations (Phase-I)	30.06.2023
6	Commercial Operations (Phase-II)	15.03.2024

iii. Yacharam**Action taken so far:**

- Draft PPA obtained from TSSPDCL on 19.08.2017
- Consent for Establishment (CFE) was obtained on 11.03.2020

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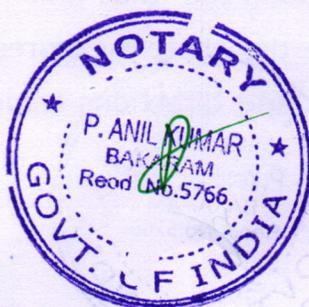
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Action to be taken:

SI No	Item/ Activity	Time line
1	Decision on Extension of capacity from 12 -14 MW	31.12.2022
2	Revised PPA	15.01.2023
3	Construction works	15.04.2023
4	Commercial Operations	15.02.2024

8. It is respectfully submitted that, GHMC has taken all necessary precautions for closed operations of MSW processing right from Door to Door collection, secondary and tertiary transportation in hermetically sealed containers to avoid the problems of spill over of waste as well as to avoid smell issues (**Photographs of collection & transportation system enclosed as Annexure VI**). Further, in compliance to the directions of the TSPCB, directions are issued from time to time for ensuring that the MSW transporting vehicles are not travelling through residential areas.
9. In respect of the complaints on the smell from MSW facility, it is respectfully submitted that the public around the Jawahar Nagar dumpsite have responded positively in the Public Hearing in 2012 on establishment of IMSWM Project as they believed that the then prevailing conditions with frequent fires and smoke due to burning of open dumpsite and leachate flowing from the dumpsite are going to be arrested with proposed remediation as part of the project. As such, the conditions have improved much after the MSW facility was established by reclaiming 214 acres of land from the old dumpsite extended over 339 acres with mixed waste strewn all over. However, as the habitations which were far away from Jawahar Nagar dumpsite have started developing closer to the dumpsite due to rapid growth of urbanization in the surrounding villages of Jawahar

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Nagar, Dammaiguda, Shantinagar, Malkaram, Bandlaguda, Balajinagar, Hardaspally etc after substantial improvement in the dumping yard after 2012 and thereby started complaining about the smell. It is also a fact that, during monsoon season the smell will be predominant due to high moisture content in the waste, thereby reducing the processing efficiency of the mechanical screens leading to accumulation of unprocessed waste on the tipping floor. However, this problem is attended by covering the unprocessed waste with tarpaulin covers.

10. It is respectfully submitted that, the following additional measures are being taken on continuous basis for controlling the smell issues:

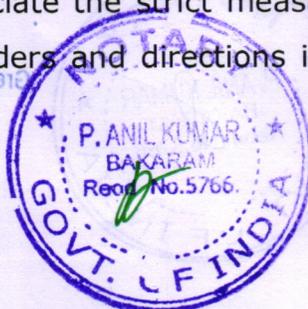
Application of Bio-enzyme on the incoming waste to replace the microorganisms in the Municipal Solid Waste responsible for generation of odour causing by-products through -

- i. Drones, Tractor mounted spraying machines, Truck mounted Fog cannons are deployed to spray odour neutralizers.
- ii. Fixed Misting system is erected around the entire periphery of working areas such as presorting area, composting section, tipping floor and active landfill for spraying of odour neutralizers.

(Photographs enclosed as Annexure VII)

Submission & Prayer

11. It is respectfully submitted that, GHMC is deeply committed to collection, handling, transportation, treatment and subsequent disposal of Municipal Solid Waste strictly in compliance to the Rules and it is humbly submitted that this Hon'ble Tribunal may be pleased to appreciate the strict measures taken by the GHMC duly complying the orders and directions issued to it from time to time




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by various Government Authorities. It is further submitted that, with the proposed diversion of about 2/3rd of MSW from Jawahar Nagar MSW facility to the other sites as per the timelines committed, the GHMC will be able to more effectively control the smell issues etc., and will improve the situation around the MSW facility at Jawahar Nagar.

For the aforementioned facts and circumstances, it is therefore prayed that this Hon'ble Tribunal may be pleased to Close the OA No. 199 of 2021 and pass such other order or orders as this Hon'ble Tribunal deems fit and proper in the circumstances of the case and thereby render Justice.

Sworn and signed on this the 17th day of December, 2022 at Hyderabad

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Greater Hyderabad Municipal Corporation

Ⓞ

Before me
Commissioner,
Greater Hyderabad Municipal Corporation
Advocate



ATTESTED
[Signature]
P. ANIL KUMAR
B.Sc, B.L.,
ADVOCATE & NOTARY
Regd. No: 5766
Appointed by Govt. of India
8-7-181, F... ERABAD,
HYDERABAD, TELANGANA.

Entered in Notarial Register on
Page No. 60 Serial No. 1057

17 DEC 2022

Photographs of the Leachate Treatment plant to treat the leachate generated from fresh MSW and from capped legacy waste.

a) Pre-treatment



b) Reverse Osmosis equipment





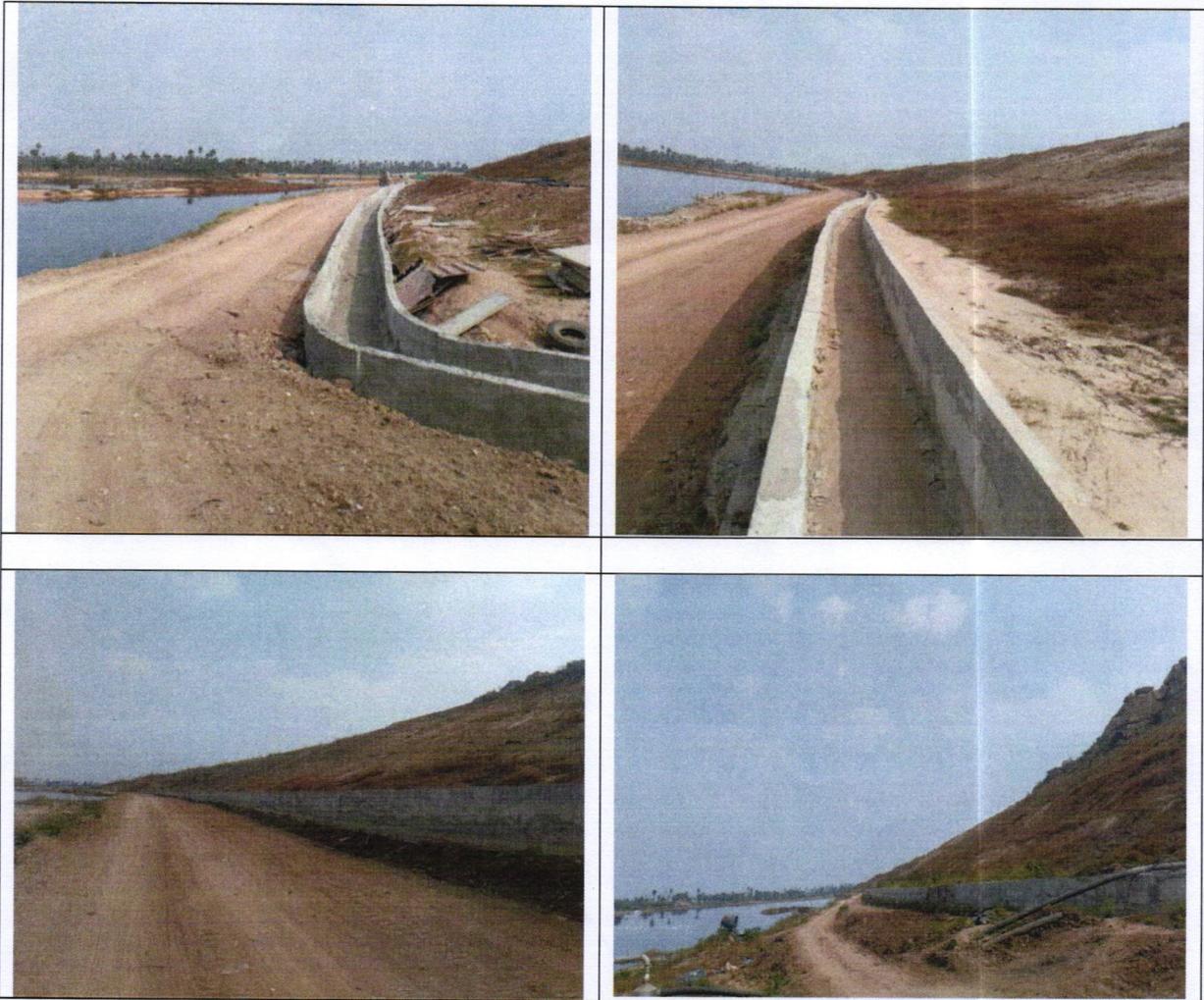
c) MEE-ATFD system





ANNEXURE II

Photographs - Storm Water Drains around the Capping area at Jawaharnagar



Photographs of MVRE plant operationalized at Jawaharnagar for Comprehensive Treatment of legacy leachate



ANNEXURE IV

Photographs showing progress of Works of 14.5 MW capacity WTE at Dundigal (V), Medchal Malkajgiri (D)



Fig: Boiler



Fig: WTP





Fig: Chimney



Fig: Switchyard



Fig: TG Building & Transformer



Fig: DM Tank



Fig: N-Pit



Fig: ACT



Fig: TG



FORM - 1

PART C5

APPLICATION FOR CONSENT FOR ESTABLISHMENT

(Information to be furnished for the purpose of issue of consent for Establishment)

1. Name of the Industrial Undertaking & Address

Hyderabad Integrated MSW Ltd- Pyranagar
 ,SANGAREDDY
 II,Gummadidala,Pyranagar,000,Pyranagar,502213

2. Process details :

2.1 Production Schedule :

2.1.1 List of main products proposed to be produced

Sl. No.	Name of The Product	Capacity	Units
1.	Raw Biogas	260	Tons/day
2.	Electricity	15	MW
3.	Recycled plastic	90	Tons/day
4.	Compost	200	Tons/day
5.	RDF	2035	Tons/day

2.1.2 Name of By-products :

Sl. No.	Name of The By-Product	Capacity	Units
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2.1.3 Approximate time by which the factory will go into 01/
production.(Month/Year)

2.2 RAW MATERIAL CONSUMPTION :

Sl. No.	Description	Quantity	Units
1.	MSW	4000	Tons/day
2.	RDF	1000	Tons/day
3.	Biodegradable Waste	1665	Tons/day
4.	Plastic waste	100	Tons/day

2.3 MANUFACTURING PROCESS :

2.3.1 Any details regarding Manufacturing Process :

Not-Selected

2.3.2 Have you any foreign collaboration :

Not-Selected

2.4 ENERGY CONSUMPTION :

2.4.1 Source of Energy : publicsupply

2.4.2 If energy is generated in plant, fuel used with consumption for e.g. Coal/Fuel oil/Diesel/Natural Gas/Wood/Others.

Name of Fuel	Daily Consumption	Unit
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3. LOCATION :

3.1 Please attach a map indicating the site with approach roads including adjacent areas on all four sides for easy identification of site of the proposed plant, for inspection.

3.2 Area of land proposed to be aquired(in Sq. Mts.) :

3.3 Area proposed to be developed(in Sq. Mts.) :

3.4 Built up area(in Sq. mts) : 116380

3.5 Green belt area(in Sq mts) : 57321

3.6 Present use of land : Agriculture

3.7 Specify location : River/ Lakes /Reservoirs

3.8 Is the land situated within any Municipality or Municipal Corporation/Contonment Jurisdiction : no

If Yes, name of the Municipality/Municipal Corporation/Contonment :

3.9 Is the land situated in approved industrial zone or estate : no

If Yes, name of zone/estate :

3.10 Which of the following features exist within 20 kilometers radius of the site in respect of L & MI and 5 Kms in respect of SSI :

Feature	Name	Distance(in Km)
Lake	Narsapur lake	4

3.9 Enclose a topographical plan covering an area of 20 KM radius of the proposed industry in respect of L & MI and 5 Kms radius of the proposed industry in respect of SSI :

4. TOWN PLANNING :

Do you propose to build Township/housing/Quarters for your employees : no

If yes, Area allocation for the above in Sq. Mts.:

Population to be accommodated(Including Employees & Families) :

Distance from township to plant site in kilometers :

Water supply Daily consumption (K. Liters) :

Sewer system : Yes

Sewage treatment : Yes

Disposal Point : On land plantation

5. WATER REQUIREMENTS :

5.1 Source of water :

S.No.	Source Type	Source Name	Quantity(KLD)
1.	Ground	Borewell	50.0
2.	Industrial supply	Industrial supply	850.0

5.2 Is any pretreatment necessary for use : no

5.3 Average daily consumption of water

Sl. No.	Purpose	Quantity	Unit
1.	Process	140	KLD
2.	Boiler feed/make up	68	KLD
3.	Washing	20	KLD
4.	Domestic	35	KLD
5.	Cooling water makeup	150	KLD
6.	Greenbelt	130	KLD
7.	Others Flue gas cleaning	50	KLD
8.	Others Ash quenching	150	KLD
9.	Others Odour Control	100	KLD

6. WASTE WATER DISCHARGES :

6.1 Waste Water discharges per day

Sl.No.	Purpose	Quantity	Units
1	Others Leachate	600.0	KLD

6.2 How do you propose to discharge the waste water : Separate streams

6.3 Type of treatment proposed to be adopted:

6.4 Point of Final Discharge

Source	Point of Final Discharge
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6.5 Waste Water Characteristics

Physical

S.No.	Source	Temperature	PH	Color	Turbidity	Odour	Total Solids	Total Suspended Solids	Total Volatile Solids
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Chemical

S.No.	Source	Acidity	Alkalinity	Hardness	B.O.D.	C.O.D.	Oils & Greases	Total Nitrogen Phosphates	Sulphates	Total Phosphates	Total Chlorides	Sodium	Potassium	Calcium	Magnesium
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OTHER PARAMETERS

Sl. No.	Source	Parameter	Quantity	Units
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6.6 What other specific toxic substance is discharged?

S.No.	Source	Toxic Substance	Name	Quantity(KLD)
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7. SOLID WASTES

7.1 Authorisation required for (Please tick mark appropriate activity / activities) :

Collection	<input checked="" type="checkbox"/>	Transport	<input checked="" type="checkbox"/>
Reception	<input checked="" type="checkbox"/>	Storage	<input checked="" type="checkbox"/>
Treatment	<input checked="" type="checkbox"/>	Reprocessing/Disposal	<input checked="" type="checkbox"/>

S.No.	Name of Waste	Hazardous Waste Description	Quantity generated per day	Storage & treatment/Pre-treatment	Reuse/recycling(in house)	Disposal	Existing	Proposed	Total After
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1.	5 Industrial operations using mineral /synthetic oil as lubricant in hydraulic systems		200						
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7.2 Non-Hazardous :

S.No.	Description	Quantity	Units	Disposal	Existing	Proposed	Total After
1.	Inert	400	Tons/day	400	0	400	0
2.	Ash	250	Tons/day	250	0	250	0

7.3 Are there any problems of subsequent Pollution of air, water or soil likely at the place of disposal of solid wastes? no

8. Atmospheric Emissions :

8.1 Emissions from fuel burning:

S.no	Stack Name	Stack Height(in mtr)	Temperature('C)	Expected Quantity(m3/hr)	Proposed Air Pollution Control System	Are any Standard of Emission prescribed for or adopted by your Industry?
1.	Boiler	60	150			Yes
2.	D.G Set	15	150			Yes

8.1.1 Composition of emissions :

Stack Name	Nature of Dust	Quantity(Mg/Cubic NM)
	Gases	Quantity(Mg/Cubic NM)

8.2 Emission from process & Fugitive Sources

S.no	Stack Name	Stack Height(in mtr)	Temperature('C)	Expected Quantity(m3/hr)	Proposed Air Pollution Control System	Are any Standard of Emission prescribed for or adopted by your Industry?
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8.2.1 Composition Of Emissions

Stack Name	Nature of Dust	Quantity(Mg/Cubic NM)
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Stack Name	Gases	Quantity
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9. OTHER SOURCES OF POLLUTION :

- 9.1 Is your industry likely to cause noise Pollution? no
- 9.2 Is there odour problem likely to occur from your industry? no
- 9.3 Is there any thermal pollution of surface Waters likely to occur from the industrial Discharge? no

10 Pollution control management :

- 10.1 Give details of organisational set up for Pollution control you propose to have?
- 10.2 What is the level of experience of the Persons incharge of pollution control?
- 10.3 Do you propose to monitor the Pollution from your industry?
- 10.4 Give details of Laboratory facilities Proposed.
- 10.5 Give details of operation and maintenance Or facilities you propose to have for pollution Control equipment and treatment plant.

11. Cost of Pollution Control

- 11.1 Total Capital Investment proposed for Pollution monitoring and Control(in Rs.).
- 11.2 Percentage of Capital Investment on Pollution Control to total fixed capital of the unit.
- 11.3 Recurring cost per annum(in Rs.)

We hereby declare that we will install and operate pollution control equipment required to meet the standards prescribed by the Board and we will not commence production, until such pollution control equipment is installed and ready for operation we will obtain a second No Objection Certificate from the Board before going into production.

Place :

(Signature of Promoter or Authorized person)

Date :

(Designation)

ANNEXURE - VI

Photographs of Collection & Transportation of MSW in GHMC

- a) Primary Collection & Transportation of MSW using Swachh Auto Tipplers



b) Secondary Collection & Transportation using modified tipper & Refuse Compactor Vehicles



c) Tertiary Transportation of MSW



Portable Self Compactor along with Hook Loader Vehicle



Static Compactor System



Static Compactor cylinder mounted on Hook Loader Vehicle





Photographs - Odour Mitigation (misting system & other measures)



Additional compost plant PEB Shed



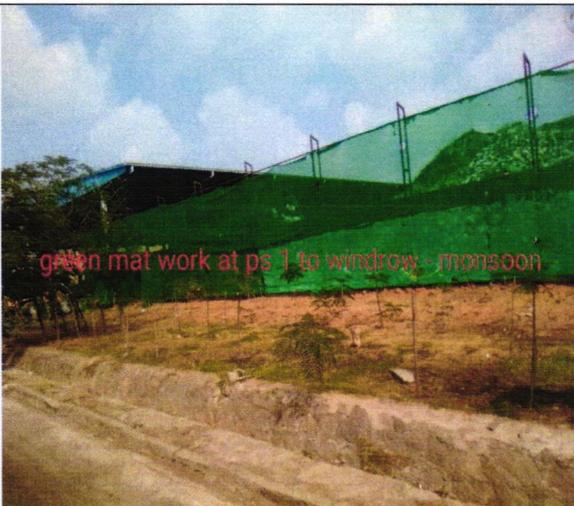
Fixed Misting system around the Tipping floor



Spraying of odour masking solution is been carried at areas where intensity of foul smell is more.



Misting system placed for Compost plant



During turning / material shifting in operating sheds, there will be generation of particulate matter. In order to avoid suspension of particulate matter, we have covered sides of compost shed with green shade net which acts as barrier to avoid suspension.



Spraying of odorite through Drones



Use of fog cannon