

Mishandling & Mismanagement of MSW An Assessment by Nagrik Chetna Manch

Introduction

1. After failing to operate Windrow Composting (Hanjer), Waste to Energy (Rochem) and Biomethanation (20 Bio gas plants), the Pune Municipal Corporation (PMC) is now resorting to dumping of Municipal Solid Waste (MSW) in quarries and forest areas in addition to constructing two 'incineration' plants. This brief gives a brief preview of pitfalls in new ventures, the performance of the existing plants and suggestions for the future to resolve the issue of management and handling of Municipal Solid Waste (MSW). Nagrik Chetna Manch (NCM) has documents collected largely through the RTI Act, 2005 in support of statements in this brief.

The Panacea

2. There is no better solution than re-introducing source segregation in PMC areas in line with the current legal regime to resolve the issues concerning the MSW crisis. The basic hierarchy for MSW should be to "**avoid, reduce, reuse, recycle, recover, treat and lastly dispose**". NCM therefore suggests that PMC should ensure that all reusables, recyclables and items from which energy recovery is possible are segregated at source. This is a prerequisite to ensure that the PMC does not dump reusables, recyclables and from where energy recovery is possible any where.

Forest Areas/Quarries

3. NCM, accordingly, does not oppose using quarries or forest areas provided landfilling is done by disposing in quarries or forest areas only **residual solid wastes after source segregation**. The areas selected for disposal of MSW should be designed with protective measures against pollution of ground water, surface water and air fugitive dust, wind-blown litter, bad odour, fire hazard, bird menace, pests or rodents, greenhouse gas emissions, slope instability and erosion as per the MSW (Management & Handling) Rules, 2000. Else, the situation will remain as is presently around PMC's plants, which is contrary to what is specified in MSW (Management & Handling) Rules.

PMC's Latest Attempt for Disposing *mixed MSW*

4. PMC's announcement in March 2014 inviting expression of interest for technologies to process and dispose *mixed MSW* and later awarding two contracts in August 2014 is of serious concern to the citizens of Pune. There is no technology in the world that can process *mixed MSW* without causing an adverse impact on the environment. Of the technologies the PMC is exploring, incinerators are known to have the worse impact on public health and ecology. Incinerator emissions are

linked to life threatening health conditions including cancers, birth defects, heart problems, asthma etc. and having several of them across the city will turn Pune into a toxic gas chamber for the next 30 years; preventing it from engaging in any other waste diversion.

5. For the taxpayers of Pune, this proposal is of greater concern because the PMC is contracting the same kind of technology that is responsible for the public health crisis in the city (with prevalent Dengue all round) and in the villages of Urli-Phursungi. The failure of the Hanjer and Rochem plants in Pune cannot be attributed solely to mismanagement. The failures are mainly of technology. Despite several warnings about the limitations of such technological interventions to treat *mixed MSW*, the PMC has embarked upon a technology based on false premises. PMC's Hanjer and Rochem plants are a testament to this fact.

Source Segregation is the Answer

6. The current situation is critical as predicted by NCM in its numerous communications to the Commissioner from May to November 2011 under the heading "Impending Pune Garbage Crisis". We have since kept the Commissioner and other authorities updated.

7. Unfortunately, PMC does not encourage segregation at source and enters into expensive and doubtful contracts, and delivers 'mixed' garbage to the contractors and pays them a heavy fee for it from the citizens' taxes. Delivering *mixed MSW* appears to be quid pro quo based on its weight; *mixed MSW* weighs more than source segregated MSW. PMC does not bat an eyelid blaming the citizens for not source segregating as if households generate the maximum quantities of MSW.

Hefty Payments to Contractors

8. It is interesting to see how our decision makers (elected representatives and officials) waste the citizens' hard earned money by paying various fees to the contractors to the tune of ₹. 1.22 crore per month or about ₹. 14.64 crores per year. This amount does not include the cost of collection of garbage and transporting it to the various processing units. PMC is committed to pay every month tipping fee / O&M costs / operating fee as follows: ₹. 27.38 lakhs to Ajinkya (200 tonnes per day) and Disha (100 tonnes per day) @ ₹. 300 per tonne, ₹. 14 lakhs per plant for 20 biogas plants (average ₹. 70000 per month per plant as operating fee), 16.73 lakhs to Hanjer plant (1000 tonnes per day @ ₹. 55 per tonne as tipping fee) and ₹. 63.88 lakhs to Rochem (700 tonnes per day @ ₹. 300 per tonne as O&M costs). This comes to 1.22 crores every month or 14.64 crores per year. Imagine the savings to the public funds if PMC ensures source segregation by all originators of MSW.

Rochem Separation Systems Private Limited

9. Rochem plant was to generate 10 MW of electricity by June 2012, which it has failed to do. As per the Concession Agreement and the Letter of Intent, Rochem is forbidden to use the 2.5 acres of prime industrial land given to it at the concessional rate of ₹. 1 per square meter per year for any purpose other than generation of power. The PMC, the MoUD, the Collector and the PCBs have ignored this blatant violation. Overall, the PMC has so far lost over ₹. 6 crores of public funds because of violations of various clauses of the Concession Agreement and the Letter of Intent by not terminating the agreement with Rochem.

Land Use Norms Violated

10. PMC's plants are built on public/semi-public land and not on land reserved for 'public utility' in terms of Maharashtra Development Plan Rules, 1970 resulting in the plants being in the midst of populated areas causing health hazards to the citizens because mixed MSW lies around the plant sites for considerable periods as not all the mixed MSW is treated in time. This is evidenced both at Disha Waste Management Private Limited and Rochem Separation Systems Private Limited. Citizens around some bio gas plants e.g. Baner and Model Colony, have also complained about bad odour and ground water pollution.

Mandatory Consent not Obtained

11. Additionally, none of the MSW processing plants in PMC area have obtained the mandatory 'consent' under the Air (Prevention & Control of Pollution) Act, 1981 and Water (Prevention & Control of Pollution) Act, 1974 although the pollution control boards agree that it is essential.

Bio Gas Plants

12. While NCM fully supports bio gas plants but does not approve of the manner in which the plants are being operated and of the blatant violation of existing legal regime. Our study of PMC's bio gas plants brings out that the bio gas plants are not at all cost-effective mainly because PMC has not prepared detailed project reports but has constructed the plants on an ad hoc basis. We found the following major lacunae while comparing two periods i.e. 1 October 2012-30 September 2013 (12 months) and 1 October 2013-30 June 2014 (9 months):

- a. The shortfall in electricity generation vis-à-vis industry norms remained at approximately 85 % over the period from 1 October 2012-30 June 2014. The plants should produce 1.2 KWH of electricity for 1 cu. meter of gas. PMC should investigate this shortfall in efficiency.

- b. Monthly power generation was 35120 KWH for the period 1 October 2012-30 September 2013 while it was 17232 KWH for the nine-month period ending 30 June 2014. The production of electricity has dropped by 35% in spite of increasing the capacity by 100 %.
- c. 173651 cu m of gas was being flared every month from 1 October 2012 to 30 June 2014. PMC should ascertain the reasons for flaring such large quantities of methane.
- d. PMC has continued to pay amounts ranging from ₹. 50000/- to ₹. 90000/- per month to each plant operator for O&M while not deriving full benefit from the bio gas plants.

Competent Authorities are Just Onlookers

13. Pollution control boards (PCB) watch helplessly so do the Ministry of Urban Development and the district authorities who have responsibility to ensure implementation of the MSW (Management & Handling) Rules, 2000 and other applicable Acts. The Maharashtra PCB just issues notices to selective erring plants. It has never taken any firm action against erring companies. Paradoxically, on 18 July 2014, the Bombay High Court in WP 4542 of 2012 had to order Nagpur-based NEERI to ascertain whether any pollution is being created by the activities carried out by the PMC and Disha Waste Management Private Limited and whether their activities are as per the prescribed norms. It passed strictures against MPCB.

Concession Agreement Violated

14. The PMC does not abide by the Concession Agreements and violations are to the benefit of the contractors. PMC has not insisted on bank guarantees for specified amounts for Rochem and Hanjer. PMC has subsidised Hanjer in violation of the Concession Agreement. PMC did not invoke penalty clauses against Rochem causing a loss to the public funds. Again, all in the hierarchy happily ignore the misdeeds for reasons best known to the parties concerned.

Conclusion

15. The authorities seem completely insulated so nothing moves them; not even the stink all round these processing plants causing untold health hazards to the citizens. It is, therefore, essential to nominate NEERI to ascertain whether any pollution is being created by the activities carried out by the PMC and its processing plants and whether their activities are as per the prescribed norms.

Nagrik Chetna Manch, 10 September 2014

For any queries on this document, kindly contact Maj. Gen. S. C. N. Jatar (Retd) at +919970093533 or scnjat@gmail.com