MSW (MANAGEMENT AND HANDLING) RULES, 2000 -

A CRITIQUE

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1. The MSW Rules provide a framework encompassing collection, transportation, treatment and disposal of municipal solid waste. These Rules are complemented by the existing Bio-medical Waste Rules of 1998 and Hazardous Waste Rules of 1989 respectively, whereby disposal of these wastes along with usual urban municipal waste is prohibited. While the Rules are comprehensive in terms of specifying responsibilities and procedures, in the context of this report the following discussion is restricted to only treatment and disposal aspects. It must be noted that these Rules are under amendment and revised version is expected to be notified by the end of 2006.

2. As per these Rules, every municipality is responsible for providing integrated services and infrastructure facilities for solid waste management within its jurisdiction. Its responsibilities are defined all the way from preparing the community for segregated collection to inoffensive storage, transportation, appropriate processing and safe disposal from environmental and health point of views.

3. For the collection stage, the Rules recommend door to door collection of segregated waste, as well as separate collection from slaughter houses, meat and fish markets, fruit and vegetable markets etc. with the objective of 'managing to make use of' highly biodegradable wastes. While horticulture waste is supposed to be collected separately and disposed off by following 'proper norms', the Rules do not clarify what these norms could be. Similarly no norms are specified for dairy waste management, instead reference is given to state laws. However, the Rules clearly prohibit open burning of any kind of waste during the collection stage.

Emphasis on treatment

4. With regard to treatment, the Rules recommend adoption of a suitable technology or a combination there of with the objectives of making use of wastes and to minimise burden on the landfill. While this is laudable and desirable from the point of view of the '3R' paradigm, it is at this point that the Rules make a risky proposition and eventually create a potential situation of

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crossing the paradigm of ‘safeguarding public health’. For the biodegradable fraction of waste the Rules recommend treatment by composting, vermicomposting, anaerobic digestion or any other appropriate biological process so as to stabilise it. In other cases, options of incineration with or without energy recovery and pellatisation are also suggested. In case of any other state-of-the-art technologies, the Rules recommend to get the approval of the Central Pollution Control Board before developing any project.

Disposal

5. For the last element in the supposedly integrated chain, i.e., disposal, the Rules recommend land filling of only that type of waste which is neither recyclable nor biologically processable. The Rules do not recommend land filling of mixed waste as long as it is found to be suitable for any processing. From that point of view, setting up of a bioreactor based landfill gas recovery system is considered not permissible and setting up a processing plant is considered to be a precondition for commissioning a sanitary landfill site.

6. Intriguingly, for these very reasons the singular scientifically developed sanitary landfill site in the country at Surat has run in to a technical controversy. The Gujarat State Pollution Control Board has not given permission for operation of this Rs. 60 million landfill because it does not have an accompanying composting plant. The Surat Municipal Corporation is not confident of being able to successfully run such a plant. As a result of this deadlock, as shown in Exhibit 1, the landfill site is lying unutilised for last three years and the MSW is being dumped in indiscriminate manner on adjacent plot. More intriguing aspect is the disregard of a clause in the Rules which permit disposal of mixed MSW in a landfill in the interim period before a processing plant could be set up.

7. With regard to location of the treatment and disposal facilities, the Rules recommend integration of landfill site with the processing plant and vice versa. It is noteworthy that environmental due diligence is recommended to be carried out during the planning stage in consultation with the respective Department of Urban Development such that necessary mitigation measures are incorporated and clearances are obtained by the promoter. However, it is not clear as to what category the facility corresponds to e.g., a large, medium or small scale industrial operation or a infrastructure utility and what criteria of assessment should be adopted. Among the mitigation measures, provision of impermeable liners for the landfill, leachate collection and treatment system, diversion of storm water drains and prevention of runoff into water bodies is mandatory.

EXHIBIT 1: UNUSED SANITARY LANDFILL AT SURAT

Location and mitigation measures

8. With regard to ambient air quality management at a landfill site, the Rules require installation of a landfill gas collection system from the point of view of odour control and safety of nearby properties. The Rules further go on to suggest gainful utilisation of the recovered gas through thermal application or power generation. It is intriguing that the Rules suggest this as an option while at the first place prohibiting disposal of degradables in a landfill which is the fundamental cause of gas production. When the system is not allowed for maximisation of gas generation, it is obvious that return on investment on gas recovery and accompanying power generation system will be unviable.

9. Schedule IV of the Rules lays down standards for, among others, pollution prevention from composting process and leachate discharge. For a composting plant the Rules recommend to maintain rotting waste in an enclosed area during pre-processing stage and take necessary precautions to minimise nuisance of odour, flies, rodents, bird menace and fire hazards. Secondly, the process rejects are required to be disposed off in a landfill without impairing the aesthetics of the processing area. Lastly, excess leachate after recycling is required to be treated and comply with discharge standards. However, given the current planning and design practices of the technology providers for windrow composting typically found in the country, these aspects are invariably not taken into account. As a result their environmental and social acceptance and functional sustainability is severely undermined.