

To: The Minister of Environment & Forests
Paryavaran Bhavan, CGO Complex
Lodi Road, New Delhi 110 003

Copy: Dr. G. Thyagarajan
The Supreme Court Monitoring Committee on Hazardous Wastes
Flat A2, Whispering Heights 132, St. Mary's Road
Alwarpet, Chennai 600 018

Mr. Claude Alvares
Member, Supreme Court Monitoring Committee
The Other India Bookstore
Above Mapusa Clinic, Mapusa 403507. Goa

Dear Sir:

Sub: TSDF at Melkottaiyur, Kanchipuram Dt, by Tamilnadu Waste Management Ltd

On 24 June, 2004, more than 1000 residents from Melkottaiyur and surrounding areas attended the statutory Environment Public Hearing on the above project organised by the District Collector. A total of nine village panchayats have passed resolutions against the proposed hazardous waste treatment, storage and landfill facility.

Melkottaiyur and surrounding areas are blessed with abundant and good quality groundwater. The proposed project, if allowed, would destroy this increasingly scarce resource. Not only that, the project site is located close to water sources such as a lake, and human habitation including a *Balawadi*.

Despite the unanimous public opposition at the Public Hearing, villagers here fear that the Government will attempt to force the project upon us as a result of the pressure it is likely to face from the Supreme Court Monitoring Committee. I understand that after decades of industrialisation without adequate infrastructure and safeguards, the regulatory authorities have suddenly woken up to the need for disposal facilities for the hazardous wastes generated. Even now, no discussion has been mooted to set up institutionalised methods for toxics use reduction or for minimising the quantities of hazardous wastes.

While I appreciate the need for such projects, I also believe that if we are to avoid repeating the past mistakes of bad planning, projects such as these should be sited in areas where their impacts are minimal and local communities offer their informed consent.

The sincerity of the existing project promoters is evident from the quality of the EIA document prepared by them. (Please see enclosed Critique of EIA by Dr. Mark Chernaik) Moreover, I have learnt from villagers in Hyderabad that the TSDF set up by the same promoters there is a notorious source of pollution of groundwater and the environment.

I wish to convey to you that the villagers are united in opposing the project. Kindly update me on the status of the project since the public hearing.

Sincerely,

Enclosures:
Critique of EIA by Dr. Mark Chernaik, ELAW-US

Excerpts of critique of the TSDF proposed by Tamilnadu Waste Management Ltd in Melkottaiyur, Tamilnadu

**Dr. Mark Chernaik
Staff Scientist, ELAW-US**

1. The EIA lacks sufficient information about the proposed physical-chemical hazardous waste treatment units. TNWML is proposing a multi-faceted hazardous waste treatment facility that will include: 1) a landfill; 2) a storage unit; 3) an incinerator; and 4) various hazardous waste treatment units.

Whereas details of the landfill, incinerator and storage unit are provided to some extent, the EIA provides no equivalent details of the various hazardous waste physical-chemical treatment units mentioned in section 3.3.5 of the EIA. In order to assess the potential environmental consequences of its proposal, TNWML must provide decision-makers and the public information with more information about the process, including flow diagrams and characteristics of waste by-products of these various waste treatment units. The current EIA should be thus rejected on the grounds that it does not provide the most vital set of information on the **waste treatment units**, since we do not know how the waste is going to be treated in this facility no complete assessment can be made about the facility itself.

2. The EIA lacks sufficient information about the proposed wastewater treatment facility. The design of the TSDF includes a number of units that would generate significant amounts of wastewater that might contain high levels of toxic constituents. These include some of the various hazardous waste physical-chemical treatment units, including a gypsum washing operation (see page 3.10), and other units, including and a laboratory facility (see page 3.11) that will use toxic reagents.

In order to assess the potential environmental consequences of its proposal, TNWML must provide decision-makers and the public with information about how it will treat wastewaters from these units and where it would discharge treated wastewater. TNWML has not done so. Section 3.4.7 of the EIA, titled Wastewater Treatment Plan, merely informs the public that: "Leachates Collected from Secured Landfill and other wastewater including vehicle and container washing, leachates generated at treatment plant and incineration is treated together (excluding domestic wastewater). Leachate treatment at the proposed TSDF shall be evaporation of the wastewater and shall be done in forced evaporation system constructed for the purpose and the residue shall be reprocessed as hazardous solid waste."

Furthermore, forced evaporation as a means of wastewater treatment suffers from a number of inherent limitations: 1) forced evaporation of wastewater containing volatile toxic substances (such as **elemental mercury**, **volatile organochlorines** and **volatile organic compounds**) will simply release these toxic substances into the air along with water vapor; and 2) unless the forced evaporation system is enclosed, it would not be possible to use such a system during periods of heavy rainfall.

The EIA should be rejected on the grounds that it does not mention these limitations let alone assess the potential environmental consequences of a forced evaporation wastewater treatment system. The hazardous waste treatment facility is a threat to the lives of the population residing around the facility.

3. The EIA lacks a response plan should leachate in unacceptable quantities be found leaking from the landfill. One of the most serious, potential environmental consequences of a hazardous waste landfill is contamination of groundwater resulting from leachate that can leak through the liner system. For this reason, U.S. law requires owners and operators of a hazardous waste landfill to have an approved response action plan should leachate in unacceptable

quantities be found leaking from the liner.

Specifically, U.S. law requires: "(a) The owner or operator of landfill units ... must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section. (b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

- (1) Notify the Regional Administrator in writing of the exceedence within 7 days of the determination;
- (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
- (3) Determine to the extent practicable the location, size, and cause of any leak;
- (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
- (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
- (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned.

Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned. (c) To make the leak and/or remediation determinations in paragraphs (b)(3), (4), and (5) of this section, the owner or operator must: (1)(i) Assess the source of liquids and amounts of liquids by source, (ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and (iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or (2) Document why such assessments are not needed." Title 40 Code of Federal Regulations, Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities - Subpart N--Landfills, section 264.304 - Response actions.

The EIA should be rejected because in the EIA, TNWML provides no response plan should leachate in unacceptable quantities be found leaking from the liner. Furthermore the EIA in its baseline survey and analysis of the water, has tested for only chromium, cadmium and lead in the heavy metal category; as a hazardous waste facility the waste will have many more heavy metals than the one mentioned above (list of heavy metal found around hazardous waste dumpsite attached). The EIA has not analyzed the ground water for the presence or absence of such heavy metals and so there is no future reference point for the facility to benchmark the presence or absence of the metals.

4. The EIA fails to consider the potential environmental consequences of emissions of dioxins and toxic heavy metals from the proposed waste incinerator. Sections 6.2.2 and 6.2.3 describe, with limited detail, how emissions of particulate matter (PM), sulfur dioxide (SO₂) and hydrogen chloride (HCl) from the incinerator might impact ambient air quality.

The limited analysis of the impact of PM, SO₂ and HCl emissions on ambient air quality is flawed due to the fact that:

- 1) the EIA fails to provide any basis for the emission rates chosen for these pollutants;
- 2) the EIA fails to add predicted impacts of PM, SO₂ and HCl to baseline ambient air quality levels of these pollutants; and
- 3) the EIA fails to assess how the predicted levels of PM, SO₂ and HCl will impact human health notwithstanding the fact that such predicted levels might be within ambient air quality standards.

However, the most serious flaw of sections 6.2.2 and 6.2.3 is not the analysis it contains but the analysis it does not! Missing from the EIAs analysis of predicted air quality impacts is the extent to which emissions of dioxins and toxic heavy metals from the proposed waste incinerator would impact ambient air quality and public health.

Analysis of predicted air quality impacts from emissions of dioxins and toxic heavy metals from the proposed waste incinerator is an especially critical undertaking in light of these following facts:

The proposed incinerator would accept and burn numerous wastes, including spent solvents, waste oils, pesticide wastes, organic wastes containing halogens, and capacitors containing PCBs (see section 3.12) that have a high tendency to produce dioxin emissions.

The proposed incinerator would be located within five kilometers of an area where there are extensive agricultural practices that would accumulate dioxin emissions into locally produced foods (see section 4.8.1.7)

The proposed incinerator would accept and burn numerous wastes, including spent carbon and refinery wastes (see section 3.12) that have a high tendency to produce heavy metal emissions (e.g. emissions of mercury, chromium, arsenic, cadmium and nickel).