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Minutes of the meeting of the working committee held on 11.10.2002 at the Environmental Training Institute class room, Tamilnadu Pollution Control Board, Chennai - 600 032 on mercury contamination due to M/s. Hindustan Lever Ltd. (Thermometer Factory), Kodaikanal, Dindigul District:

Present:

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| 1 | Thiruvallargal G.Rengasamy | Former Member Secretary, TNPCB - Chairman |
| 2 | R. Ramachandran | Addl Chief Env.Engineer, TNPCB - Convenor |
| 3 | R. Gnanasekaran | Revenue Divl.Officer (rep. Dist. - Member Collector, Dindigul). |
| 4 | G.S. Ganapathy | Chemical Industries Association - Member |
| 5 | M.S. Srinivasan | Vice President (Manufacturing) - Member M/s EID Parry (India) Ltd |
| 6 | L. Sabarathinam | Past President, -- Member Madras Chamber of Commerce |
| 7 | Navroz Mody | Greenpeace -- Member |
| 8 | A.R. Krishna Ram | District Environmental Engineer -- Member TNPCB, Dindigul |
| 9 | Selvi Meenakshi | Palani Hills Conservation -- Member Council representing R. Kannan |

Invitees

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| 1 | Thiruvallargal A.Krishnamoorthy | Environmental Engineer (i/c), TNPCB |
| 2 | V. Rohit Kumar | Asst. Engineer, TNPCB |
| 3 | Rajesh Rangarajan | Toxics Links (Citizen Civic Action Group) |

Representatives of M/s. Hindustan Lever Ltd.

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| 1 | Thiruvallargal Gurdeep Singh | Hindustan Lever Ltd. Mumbai |
| 2 | M.K. Sharma | Hindustan Lever Ltd. Mumbai |
| 3 | Ashok Gupta | Hindustan Lever Ltd. Mumbai |

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4	Anil Baskar	Hindustan Lever Ltd. Mumbai
5	Dr. Rajagopal	Hindustan Lever Ltd. Mumbai
6	Dr. P. Mascernhaas	Hindustan Lever Ltd. Mumbai
7	R. John George	Factory Manager, Hindustan Lever Ltd. (Thermometer Factory) Kodaikanal
8	M. Paul Whincup	ERM Consultant, Hindustan Lever Ltd. Mumbai
9	Tom Van Tuenbroek	TNO Consultant Hindustan Lever Ltd. Mumbai
10	Damika Wickremasinghe	URS Dames & Moore, Consultant, Hindustan Lever Ltd. Mumbai

Representatives of Employees

1	Thiruvallargal S. Raja Mohamed	Secretary, Ex-Ponds-HLL Employees Association
2	K. Gopala Krishnan	Ex-Ponds-HLL Employees Association
3	P. Pandey	Ex-Ponds-HLL Employees Association

At the outset the Chairman of the Working Committee, welcomed the members, representatives of M/s. Hindustan Lever Ltd and other participants. He recalled briefly the incidents that had occurred and the various reports furnished by M/s. Hindustan Lever Limited towards Environmental Assessment of the site and Risk Assessment due to Mercury contamination in the environs of the Thermometer Factory of M/s. Hindustan Lever Limited which functioned at Kodaikanal. The representatives of M/s. Hindustan Lever Limited were requested to make a presentation on the following reports:

- i) Environmental Impact and Risk Assessment for Mercury
- ii) Health and Safety Plan – Site Remediation
- iii) Remedial Action Plan

Mr. Paul Whincup (ERM), Mr. Damika Wickrema Singhe (URS Dames & Moore) and Mr. Tom Van Tuenbroek (TNO – Netherlands) made a presentation on the above said reports and on the field investigation undertaken by them. After the presentation the committee members expressed their concern over the variations in the material balance in respect of mercury and pointed out that the loss of mercury into the environment would require a more precise determination and called on HLL to furnish data on material use and disposal as reported to statutory authorities during the functioning of the plant, as well as an inventory of all materials on site so that the committee may verify the information prior to the removal of material from the site.

The committee members also stressed that the mercury levels at the site be reassessed while carrying out the remediation works and the impact of both upper limit and lower limit of unaccounted mercury to be investigated while the remedial works are in progress. However the committee members were of the unanimous view that the entire plant & machinery which had come into contact with mercury should be scrapped and that the entire stock of mercury at the site should be exported to authorized recycling facility abroad for retirement. Committee members were also of the view that the remediation measures at the site should not be initiated unless the entire stock of mercury available at the site as elemental mercury, mercury in finished and semi-finished thermometers and in broken or crushed glass is packed, labeled, recorded and sent for reclamation to the facility identified by M/s. Hindustan Lever Limited in USA with prior approval of all concerned authorities. After detailed discussions the following decisions were arrived at.

i) Mercury balance shall be reworked and finalized by the committee after obtaining additional data input requested from HLL, and verification of the same against the stock and from by sampling and resurveying of the site while prior to the commencement of remediation work is initiated.

ii) ii) The remediation work at the site shall be initiated with the approval of TNPCB only when the Hindustan Lever Limited (Thermometer Factory), site is cleared of all accumulated stocks of mercury in various forms namely elemental mercury, mercury in finished and semi-finished thermometers, in broken or crushed glass and ETP sludge. Till such time no drilling, digging or demolition at the site shall be carried out without prior permission of Tamilnadu Pollution Control Board. Initially, hot spots containing elevated levels of mercury shall be prioritized for remediation after assessing the exact number of such hot spots. The mercury bearing material shall be removed from the site and transported by adhering to the Protocol which is to be approved by the Tamilnadu Pollution Control Board. Till such time, one person from the Inspectorate of Factories may be posted at the site to ensure that there is no tampering at the site and Tamilnadu Pollution Control Board may address the Chief Inspector of Factories. It may be mentioned that HLL informed the Committee that around Feb-March they had without permission excavated the flooring of the factory and removed highly contaminated soil from below.

In case it is possible to obtain necessary approval within four months to export the mercury and mercury bearing waste indicated in item above to the USA, the material may be transported directly to the concerned ports for further export. In case it extends beyond four months, the mercury and mercury bearing waste lying on site shall be transported to plains and stored in a transit storage facility approved by Tamilnadu Pollution Control Board by following all relevant protocols till the mercury and mercury bearing glass scrap is exported to the country of origin.

iii) Though the consultants M/s. URS Dames and Moore & TNO Netherlands, engaged by M/s. Hindustan Lever had recommended that the site be remedied up to a level of 10 mg/kg of mercury as per Dutch Standards of Urban Residential areas. It was suggested that after the remediation is over, one more survey would be conducted by Hindustan Lever Ltd, to ensure that all soil containing more than 10 mg/kg of mercury is removed.

- iv) As informed Thiru Navroz Mody will furnish details of supportive documents related to limits for mercury namely 0.03 mg/kg to decide the limit to be specified for remediation considering the ecological sensitivity of the site and will furnish details of inconsistencies felt or observed if any in the report furnished by the consultant. Based on Thiru Navroz Mody's Report the committee would decide about the need for further remediation.
- v) Unused, uncontaminated stem glass and broken glass from non mercury section shall be isolated after proper listing, inspected, monitored and returned back preferably to the original supplier with the approval of concerned authorities. In case the thermometer stem glass cannot be returned to the original supplier the stem glass shall be crushed defaced and sold as scrap. Hindustan Lever Limited shall also work out the material balance for glass consumption.
- vi) The entire plant and machinery which had come into contact with mercury shall be destroyed rendered unusable and scrapped after decontamination with the approval of the Tamilnadu Pollution Control Board.
- vii) HLL have agreed to provide records pertaining to all ex-workers whoever asks for them in writing, including to families of those who expired after employment at the factory. The Committee suggests that the findings of the company on health impacts be reviewed by an appropriate authority.
- viii) Regarding the medical surveillance and occupational health aspects Thiru Navroz Mody, Committee member suggested that the Board makes an independent review of the health records and medical examination carried out by the unit for the employees by an outside competent agency. However other committee members suggested that the aggrieved employees prefer an appeal against the orders by which they are aggrieved and suggested that the Tamilnadu Pollution Control Board may ask the Factory Inspectorate to investigate the health records and review the medical examination carried out by the unit for its employees by an outside competent agency. However it was once again advised that the Government in the Labour Department might be approached regarding occupational health related issues.

Name

Signature

Thiruvalargal G. Rengasamy – Chairman Working Committee

R. Ramachandran – Convenor Working Committee

R. Gnanasekaran -- Member
Revenue Divisional Officer, Kodaikanal

G. S. Ganapathy -- Member

M.S. Srinivasan -- Member

L. Sabarathinam -- Member

Navroz Mody -- Member

A.R. Krishna Ram -- Member

Selvi Meenakshi