



Pyrolysis: another reckless investment by the Government

The Government of India, it seems, is loath to learn from past mistakes. In this instance, they are actively promoting pyrolysis, a burn technology, to dispose of medical waste. The technology has not been proven yet and is being questioned the world over. Even in India, it has yet to receive a nod from the Central Pollution Control Board (CPCB). Even though safer non-burn technologies exist, the pursuance of a potentially harmful incineration based technology is baffling.

The Department of Science and Technology, is pursuing the development of the low-cost pyrolysis system. This system, the prototype of which is under trial, is being developed by the Gujarat-based Institute of Plasma Research. The claim of the Facilitation Centre for Industrial Plasma Technology that the technology is eco-friendly is questionable since pyrolysis (burning in the absence of oxygen). Emission norms have also not been developed for pyrolysis. Proponents of the pyrolytic systems maintain that they are not incinerators and do not generate hazardous by-products such as dioxins. With medical wastes, and other similar materials, a complete absence of oxygen is unachievable. As a result, some oxidation is bound to occur during pyrolysis, leading to the formation of dioxins and related products of incomplete combustion. Thus, while the government continues to push for this burn technology, the fact remains that it is capable of generating deadly pollutants linked with incinerators,

whatever the plasma centre may claim.

The technology being proposed will deal with 15-100 kg of unsegregated waste per hour, at an investment of 30,000 USD. The Institute had proposed its trial installation in five key hospitals in Delhi and other places. This has fortunately been put on hold due to uncertainties regarding emissions, segregation, costs, level of pollution, etc.

A pilot plant was however set up at the Ahmedabad-based Gujarat Cancer Research Institute in 2001. The commercial prototype (research) system was completely developed in July 2003. The first such plant will soon be set-up at the Civil Hospital, Ahmedabad. The centre has transferred the technology to Ahmedabad-based M/s Bhagawati Pyrotech Limited, which will market the system. In spite of repeated requests, the government has not provided any data regarding emissions by the pilot plant at Ahmedabad.

Recently, the Chief Minister of Goa declared (in the legislative assembly)

that a plasma pyrolysis plant would be set up at the Goa Medical College to treat its bio-medical waste. Sharing the Chief Minister's enthusiasm, or perhaps inspired by it, the Goa State Pollution Control Board has authorised 69 new incinerators to be set up. This is in complete violation of the guidelines issued by the CPCB which states that installation of an incineration facility by a healthcare unit shall be disallowed.

While the government is full of praise for this technology, (they have invested a lot of money and also hold a stake in it being adopted), what it is overlooking is the fact that there are safer ways of solving the problem, which are already being implemented. Technologies such as autoclave, microwave, hydroclave, which basically disinfect waste without disturbing the chemical form of the material have been proven successful in treating medical waste.

The Indian Government should learn from other countries which are managing their waste by adopting 'non-burn' options. Being a signatory of the Stockholm Convention, it must start phasing out dioxin and furan producing technologies. If plasma pyrolysis is promoted, it would be a step in the opposite direction.

As one example of what can be done about such flagrant violations of norms, the BMC story in the IndiaFile section overleaf showcases how NGOs and local communities are raising their voice against deadly technologies such as these. ▲



INDIA FILE

Getting tough on government hospitals

Concerned over the unsafe waste disposal practices of government hospitals, the health department has evolved stringent guidelines for bio-waste management. The guidelines are aimed at hospital chiefs, informing them about the basics and instructing them to constitute Infection Control Committees. The guidelines note that the extensive use of disposables has added to the waste problem. If these are not properly collected, transported and disposed of, they become a source for diseases.

Bangalore hospitals generate approximately 200-1000 kg of infectious and non-infectious waste every day.

Source: The Times of India, Bangalore, August 15, 2003

Pressure from citizens forces BMC to shut down polluting incinerator

The citizens of Mumbai can breathe easier now, literally. The pressure from citizens has forced the Brihanmumbai Municipal Corporation to shut down the

incinerator at Sewri Centralized Facility in Mumbai. The incinerator was set up in 2002 to handle 5 tonnes of waste per day from all hospitals in Mumbai. Only 1.5 to 2 tonnes of waste managed to reach the incinerator every day.

Around April this year, the BMC found that the incinerator's levels of particulate matter – the tiny particles released from the chimneys – stood at 792 parts per million (ppm). The Maha-

ashtra Pollution Control Board's standard for incinerators is 100 ppm. This large discrepancy occurred because the water shower that was meant to arrest the suspended particles had stopped functioning.

As usual, the price for wrong decisions and negligence was paid by innocent citizens who were unaware of any of the issues till soot particles started raining from the chimney. Local doctors reported increasing bronchitis in the area, with children and old people the worst affected.

Mr Parekh, a BMC official, confirmed the closure of the incinerator. Henceforth, all bio-medical waste will be autoclaved. ▲

Rampant reuse of disposable syringes



The paramedics at Shyama Prasad Mukherjee hospital in Lucknow resort to unsafe practice of reusing disposable syringes, in total disregard of health norms. The reason for threatening the lives of the public that they are supposed to keep healthy? Lack of funds!

When large funds are spent on educating the masses against the threat of AIDS and other serious diseases contracted by the use of contaminated syringes, it is disturbing that poor allotment of funds is leading to such practices. Nurses continue to use disposable syringes more than once after reportedly autoclaving them along with glass syringes. Senior doctors have corroborated such practices while expressing their helplessness to contain the problem. "Staff nurses, when asked about the unhealthy practice, come up with their plethora of demands," they lament.

Meanwhile the lack of funds is forcing more and more hospitals to resort to such unsafe practices and thus raises the debate again over the use of glass versus plastic syringes.

Source: Hindustan Times, Lucknow, September 1, 2003

WORLD NEWS

IRELAND TO TREAT MEDICAL WASTE WITH 'NON-BURN' TECH

Ireland is on the front lines of the global movement to protect public health and the environment by using safer 'non-burn' technologies to treat medical waste. Recently, the Joint Waste Management Board of Ireland awarded a 10-year contract to Sterile Technologies Ireland (STI) to dispose of nearly all the waste from public hospitals in Northern Ireland and the Republic of Ireland. STI will dispose of about 10,000 tons of medical waste per year, 95 per cent of which will be sterilised with a steam-based system and buried in landfills. The remainder, which includes body parts and cytotoxic material, will be incinerated abroad. ▲

Source: The Stethoscope, September 2003

BAN ON MERCURY AMALGAM RECOMMENDED

The Swedish Dental Material Commission has ended a study on the effects of mercury in dental amalgam and has recommended its ban.

Last autumn, the Commission set up a committee to report on the past five years' research literature on amalgam and the health hazards, if any, of mercury. The committee, after a thorough review of the medical literature from 1997-2003, concluded that, "For medical reasons, amalgam should be eliminated in dental care."

Source: Environmental News Service, June 4, 2003



RESIDENTS AIM TO FORCE CLOSURE OF INCINERATOR

In another example of aware citizens exercising their power to better their lives, residents of communities near the Celsius Corp incinerator in Caguas, Puerto Rico, threatened to camp out in front of the Environmental Quality Board's (EQB) headquarters to protest what they believe are toxic emissions from the incinerator.

Residents denounced that the EQB has failed to demand that Celsius stop burning biomedical and pathological waste unless it complies with air-quality standards.

EQB acknowledged that the inspection process of the incinerator has been delayed. The residents' spokesman said that a recent study by the University of Puerto Rico's, School of Public Health has revealed that the Celsius incinerator emits toxic substances in excess of normal parameters and these have caused respiratory illnesses in hundreds of residents.

Source:

www.puertoricowow.com

NGO SERVES NOTICE TO THE GOVERNMENT

Bangladesh Environmental Lawyers Association (BELA) has served a notice to different government agencies responsible for protecting and promoting public health. BELA blamed them for their utter negligence in regulating the health hazards caused by medical waste.

While it was expected that the relevant agencies would frame and implement necessary regulations for effective management of medical

waste, the agencies concerned have opted for redundant technology like the incinerator, said the notice. Incinerators are being increasingly discouraged in developed countries for inefficient disposal of hazardous and medical waste causing harmful impact on human health.

The Bangladesh Environment Conservation Act of 1995, to be read with the Rules of 1997, has classified incinerators as falling under the 'red' category of operation and also made it mandatory to undergo strict environmental impact assessment (EIA) for setting up incinerators. BELA, said the notice, has no information on the EIA findings of the incinerator that has been set up.

BELA, therefore, demanded immediate a halt of all steps for setting up/operating incinerators in state-owned as well as other hospitals and medical centres. BELA served the notice on secretaries of health and family welfare, environment and forest, local government, rural development and co-operatives ministries including director generals of health services directorate and department of environment. ▲

SIGN ANNUAL MEETING HELD IN KENYA

The annual Safe Injection Global Network (SIGN) meeting was held in September in Nairobi, Kenya. The meeting was organised to exchange information regarding safe injection usage and to encourage countries in sub-Saharan Africa to address infection control. Non-incineration treatment technologies were also discussed. ▲

INTERACTIVE

North pushing polluting technology to the South – Llewellyn Leonard

For years, polluting technologies such as incinerators, which have been rejected in the North, have been pushed to developing countries. Since the mid-1990s, dirty technologies such as the incinerator have increasingly been replaced with cleaner technologies in countries such as USA. Due to this rejection in their home country, US incinerator vendors are pushing their deadly wares into other areas, such as Africa, where health and environmental regulations are lax.



Ironically, the US government has even facilitated the export of incinerators under the guise of 'technology transfers' and 'environmental exchanges'.

A number of new proposals for incinerators, being pushed and funded by the US, are currently on the table in Africa. During the course of last year I was shocked by the results of a survey conducted by Essential Action on the World Bank Group (WBG) and its promotion of incineration. What was shocking was that despite the known health hazards and extreme economic burdens of incineration the WBG continues to promote this dirty technology.

As the anti-globalisation movement gathers steam worldwide, and continues to incorporate environmentalism into its general philosophy, it is hoped that through continued awareness and pressure from civil society, the corporate takeover of the world will be halted.

Developing countries cannot afford to sit back and accept the agendas of developed countries or else our biggest environmental problems will come from our own inactions and the choices we make.

(Llewellyn Leonard is Waste Project Coordinator at groundWork, a non-profit environmental justice service and development organisation working in South Africa)

HuMAN AFFAIRS

Vikrant Chitnis receives honourable mention in international competition

Health & Us – Medwaste Action Network (HuMAN) congratulates Vikrant Chitnis for an honourable mention in the international competition for finding innovative technologies for treatment of medical waste in rural areas organised by Health Care Without Harm (An international coalition of 350 members in 38 countries, working towards transforming the healthcare industry worldwide).

The coordinating committee reviewed and quantitatively scored 58 preliminary designs submitted by contestants from around the world. Based upon this initial evaluation, 30 contestants were invited to submit complete descriptions of their concepts to an international panel of judges. Utilising published criteria; the judges selected the three winning designs and the five that received honourable mention. ▲

Forthcoming Events

National Workshop on Bio-medical Waste: To address the growing concern about medical waste management, Choithram Hospital and Research Centre is organising a two day workshop in Indore from February 21-22, 2004. The seminar will address issues including segregation, hazardous chemical substances in hospitals, legal aspects of cen-

In continuation of this standard feature of UPDATE, we are profiling HuMAN members to increase awareness about their organisations and the work that they do.

DR NIRMALA GANLA

Dr Ganla is a practicing obstetrician gynecologist in Pune. Her primary focus in medical waste management has been in treating the bio-degradable waste from the maternity home which consists mainly of placenta, sanitary napkins, dressing material, etc. The treatment of the waste is done with Sujala bio-sanitiser, a process similar to vermiculture, with good results.

Contact: hganla@hotmail.com

PANCHAVATI RURAL DEVELOPMENT SOCIETY, HYDERABAD

PRDS focuses on spreading awareness and education. It works in schools, health education, women development banks and medical waste management. They have been active in this field and have been spreading awareness through magazines, organising orientation education programs for the health staff and organising seminars for health departments.

tralised facility, working models of effluent treatment plants and alternatives to incineration. For more information, contact vikrant_chitnis@hotmail.com. ▲

'Quotes from the Earth' - Environment Film Festival: Toxics Link is organising a three-day film festival, in collaboration with the India International Centre, from January 22-24, 2004, at the India International Centre, New Delhi.

The festival aims at offering a grounded view of the word 'Environment' by relating it to current perspectives, through the medium of films which have engaged with some of the critical environmental issues in India. ▲

If you have suggestions or require information, please contact:

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You or your organisation can be a part of the Health & Us – Medwaste Action Network (HuMAN) by becoming an Active Member (involved with HuMAN on a regular basis) or a Member in Principle (no active participation but endorsing HuMAN principles).

Contact us at the Delhi address given alongside, and provide us with the following information:

1. Name
2. Occupation and designation
3. Address, phone, fax and e-mail
4. Past experience of / interest in medical waste

Once we have this information, we will send you more details on membership