



"WRAPPED IN PLASTICS: THE ENVIRONMENTAL CASE FOR REDUCING PLASTICS PACKAGING,"

an **Environmental Action Foundation (EAF)** report by Jeanne Wirka. At last! a comprehensive source-book on plastics. This reports details the industry, the chemicals used as monomers and additives, recycling and degradeables, coupled with facts, figures, and references. "In 1980, for example, nearly 100% of the vinyl chloride produced went into PVC, 100% of dimethyl terephthalate went into PET, 72% of the styrene went into polystyrene and other styrene resins...Among the largest resin producers are many of the giants of the chemical industry, including DuPont, Dow Chemical, Union Carbide, Monsanto, Hoeschst-Celanese, Gulf Oil, Amoco, Eastern Chemicals, Mobil, Soltex, Allied-Signal, Reichhold Chemicals, Borden Inc., G.E., Goodyear, Phillips, and Occidental Petroleum... many of the chemicals used in the production and processing of plastics are highly toxic. Both polymer manufacturing and plastics processing produce hazardous solid waste streams, air emissions, and waste water. Once the short lifetimes of throw-away plastics are over, we create yet another waste stream: 'post-consumer' garbage. Improper land disposal of hazardous wastes, emissions of toxic chemicals into the air, and discharges of toxic industrial effluents into waterways all threaten public health and the environment at the 'front-end' of plastics production. At the 'back-end' post-consumer plastic trash is littering our streets, oceans, and wilderness areas, and contributing to our nation's solid waste crisis...**In an EPA ranking of the 20 chemicals whose production generates the most total hazardous waste, five of the top six are chemicals commonly used by the plastics industry.** These include propylene (ranked first), phenol (third), ethylene (fourth), polystyrene (fifth) and benzene (sixth). In 1980, 44% of propylene, 73% of phenol, 61% of ethylene, and 72% of styrene produced were consumed by the plastics industry. A complete listing and description of some of the commonly-used toxic chemicals used in producing each of the packaging plastics is given in Appendix B...Volatile air emissions of chemicals used in plastics production pose threats to production workers and people living near plastic plants. It has been shown, for example, that people living within 2 miles of a polyvinyl chloride plant have an increased risk of cancer from exposure to vinyl chloride emissions. Workers in PVC plants face even greater risks. Studies have shown that PVC plant employees are 11 to 16 times more likely to develop liver cancer and 4 times more likely to develop brain cancer than the general population...A recent study conducted for EPA by Franklin Associates Ltd. concludes that plastics accounted for 9.6 million tons, or 7.2% by weight of the municipal solid waste stream in 1984...if the Franklin results are converted to volume estimates, plastics accounted for 31.4% by volume of municipal solid waste in 1984...Nearly one-third (32.7%) of the 133 million tons of discards in 1984 was packaging materials...By the year 2000, the volume of plastics in the waste stream is estimated to approach 40%...Of the pollutants present in air emissions and ash from MSW incinerators, the worst offenders are toxic metals, acid gasses, and synthetic organic compounds, including dioxins and furans. Burning plastics may contribute to all three...Lead, cadmium, and chromium, for example, are present in a variety of additives used to make plastics...According to EDF (Environmental Defense Fund), currently operating resource recovery incinerators are loading the environment with twice as much lead per year as is emitted by all the leaded gasoline used in 1986...The burning of plastics and other chlorinated substances also produces significant amounts of hydrochloric acid (HCL). In addition to contributing to acid rain, HCL becomes a very corrosive acid as soon as it comes in contact with moisture, causing localized impacts on vegetation, paint finishes, iron and other corrodable materials...Because chlorine is a necessary precursor to dioxin formation, debate has been raging over the contribution of burning chlorinated plastics to dioxin emissions from MSW incinerators. Chlorinated plastics, including PVC, are responsible for a large percentage of the total chlorine in municipal solid waste. Measurements of Brooklyn's trash, for example, found that plastics were

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responsible for 52% of the total chlorine...Non-refillable glass, aluminium and steel... can be recycled into new products almost indefinitely. However, the same is not true for plastics." On the biodegradability of plastics, the Society of the Plastics Industry technical director "Pat Toner recently told Modern Plastics, 'The end products of plastics degradation are little understood and need looking at'...But for the time being, the jury is out on the potential environmental impact of degradables...the plastics industry remains vehemently opposed to source reduction. Industry representatives argue that plastics that cannot be recycled should be incinerated...Incinerating trash, without first embracing source reduction and recycling, allows waste generators to go on acting as if the cost of disposal were 'free.' The production, use, and disposal of single-use plastics packaging and products are not 'free.' We all pay for these conveniences through tipping fees at landfills and incinerators, polluted groundwater and air, the depletion of the ozone layer and fast-dwindling natural resources...Julian Hill, one of the inventors of nylon, looked back on the last 50 years of plastics history in a recent interview with The Washington Post. Summing up his concern with the remarkable growth of plastics, Hill remarked 'I think the human race is going to perish by being smothered in plastic.' This 156 page report is essential reading for everyone concerned with waste. Available from: **Environmental Action Foundation**, 1525 New Hampshire Ave, N.W., Washington, D.C. 20036. Tel: 202-745-4870. The cost of the report is \$10 for individuals, \$20 for government agencies and \$30 for industry.

WASTE MANAGEMENT INC. BRINGS RECYCLABLES TO THE DUMP. Hazardous Waste News (HWN)

"learned recently that the grass roots group, **Dumpbusters**, in Spencerville, Ohio, followed **Waste Management** trucks picking up bottles and cans at a 'recycling' center. According to eye witnesses **HWN** interviewed, **WMI** trucks picked up the recyclables and hauled them directly to a landfill where they were dumped like any other garbage."

HWN #93. **HWN** has published a list of the 772 **WMI** subsidiaries, by state and alphabetically by name, so you can tell whether your adversaries are owned by **WMI**. The 36 page list is available for \$5 from **Hazardous Waste News**, PO Box 3541, Princeton, NJ 08543-3541.

"INTERNATIONAL TRADE IN TOXIC WASTES: POLICY AND DATA ANALYSIS BY GREENPEACE."

"Principle 21 of the 1972 Declaration of the U.N. Conference on the Human Environment adopted at Stockholm, declares that each state is responsible for ensuring that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of their own national jurisdiction. In support of this Principle, and the Cairo Guidelines, Greenpeace International calls for a global ban on the transboundary movement of wastes." This June 1988 **Greenpeace** report overviews the trends in international waste trade shipments, case studies of international waste trade and a detailed inventory of known and proposed waste shipments.

Available from International Waste Trade Campaign, **Greenpeace USA**, 1436 U Street, N.W., Washington, D.C. 20009. Tel: 202-462-1177.

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