

## Ecology Center Joins Challenge to Dow Dioxin Discharge

The Ecology Center, other environmental groups and concerned citizens filed a petition with the state challenging portions of Dow's permit to discharge dioxins into the Tittabawassee River.

The petition seeks to reduce the amount of dioxin allowed to be discharged, set in the new permit 80 times higher than safe levels and four times higher than in the company's previous permit. The petition also seeks to impose protective limits on other dioxin and furan compounds present in Dow's discharge at dangerous levels. The new permit does not establish any limits for these compounds.

The petition also asks the DEQ not to stay the new permit while considering the petition because the new permit contains some provisions that are more protective than the prior permit.

The Lone Tree Council, the Public Interest

Research Group in Michigan ("PIRGIM"), The Ecology Center, Bay City resident Terry Miller, and Midland resident Diane Hebert filed the petition with the Michigan Department of Environmental Quality (DEQ) on October 16.

"Dioxins and furans are believed to be the most potent poisons on earth. Yet Dow's permit allows Dow to discharge one type of dioxin at concentrations 80 times higher than the maximum level determined by the state to be safe," said Terry Miller, president of the Lone Tree Council "And it imposes no other limits at all on the other dioxin and furan compounds present in Dow's discharge."

In July, the DEQ issued Dow a permit which set the safe discharge level for one type of dioxin - 2,3,7,8-

*Continued on page 9, Dow*

## Michigan Incinerators Going Up in Smoke

Are trash incinerators the nuclear power plants of the 1990s? Nuclear plants were touted as the solution to the nation's energy needs in the 1950s and 1960, and were then targeted for wholesale dismantling by environmental and peace activists in the 1970s and '80s. Since the early 1980s, no new nuclear power plants have been commissioned in the United States, and several facilities have been shuttered.

In the late 1970s and early '80s, trash incinerators were suggested as the solution to the nation's garbage disposal needs. Since the early 1980s, environmentalists and neighborhood groups have been fighting to stop the incineration of garbage. Trash incinerators are the country's largest single source of dioxin. They are also the second largest source of mercury to the environment, and generate other air pollutants and toxic ash.

In the past six months, community groups in southeast Michigan saw two important developments in their efforts to shut down the trash burners around the region. In Clinton Township, one of the state's most polluting waste incinerators — the Grosse Pointe - Clinton Refuse Dis-

posal facility — was closed by the intergovernmental authority which owns the facility after a citizen uproar about the costs of the facility. Now, the second biggest polluter, the Central Wayne Sanitation Authority (CWSA) incinerator in Dearborn Heights, may be in danger. CWSA applied for a state permit to nearly double its capacity and bring their facility into compliance with federal and state air quality regulations. The incinerator is located adjacent to a low-income African-American neighborhood. Neighbors and environmental organizations have bitterly fought the expansion. (See the Ecology Center's abridged testimony in opposition to the expansion, page 10)

Although the Michigan Department of Environmental Quality (MDEQ) recently approved the facility's air permit, CWSA is being seriously questioned by its owners. The incinerator is owned by, and serves, the communities of Dearborn Heights, Inkster, Wayne, Westland, and Garden City. With the plummeting prices of landfill disposal in southeast Michigan, the

*Continued on page 13, Incinerators*

# Ecology Center Testimony Against Central Wayne Incinerator

Below is an abridged version of the Ecology Center's testimony before Michigan Department of Environmental Quality (MDEQ) officials against the Central Wayne Incinerator. We're printing them here because of the significance of the proposal and because most of the arguments hold for other incinerators.

## Objections to the Risk Assessment

We are opposed to the expansion and continued operation of the Central Wayne incinerator because its operation poses unnecessary and therefore unacceptable hazards.

The controls proposed for this facility are numerous and a considerable improvement over the existing facility, and the risk characterization performed more extensive than most. However, even extensive and responsible risk characterizations cannot answer the question of whether a facility is safe, because there are so many variables that are not included in the risk characterization. For instance, although we know that this facility will emit a complex mixture of highly toxic chemicals, we only calculate the risk of some of them, and then, for the most part, only one at a time. Even though we know that when some chemicals are combined, they are more toxic

than you would expect by just adding together their toxicity. Unfortunately, regulators haven't figured out how to account for this in their models.

The following list is an abbreviated list of concerns related to the risk characterization for this facility.

First, there are numerous persistent, bioaccumulative toxic compounds, and additional carcinogens known to be released during incineration of municipal waste which have not been included in the risk characterization. For instance, the risk assessment didn't take into consideration

hexachlorobutadiene, and the numerous chloromethanes, chlorobenzenes, chlorobutanes, chloroethers, and other compounds likely to be emitted.

Particles of incomplete combustion formed during the combustion of municipal waste are poorly characterized. The EPA estimates that thousands of PIC's are formed though only about 100 have been identified. The most comprehensive research done has identified only 60 percent of the mass of the unburned hydrocarbons in the air emissions. This suggests that the characterization of only a handful of compounds does not begin to fully characterize the true risks of the facility.

The risk assessment only characterizes risk for children

for six years. The justification for this is not given. Human health data on the effects of chemicals on infants and children suggest that children continue critical development, including brain development, until their late teens. What is the justification for limiting the evaluation of this exposure to 6 years?

The risk assessment fails to consider the unique vulnerability of the developing fetus to the whole range of toxic chemicals released from this facility. Emerging evidence suggests that there may be exquisite moments of sensitivity of the fetus, and that even a tiny exposure, at the right time, can disrupt the function and capacity of that child permanently. Most chemicals, including some of the chemicals which will be emitted from this facility, have not been tested for their capacity to harm the fetus in this way.

A full assessment of the existing lead levels in children must be done. Many children in Wayne County are already lead contaminated or near levels where their cognitive function may be impaired. Any additional exposures like those expected from this facility will add to the existing risk. The EPA has not established a safe level of exposure to lead, because any exposure is thought

to pose risks. Given there is no safe level of exposure to lead, how can the facility be characterized as safe? Given there is no safe level of exposure to lead, why does the permit fail to encourage the separation of household items to limit the input of lead to the incinerator?

Given there is no known safe level of exposure to dioxins and furans, how can this facility be characterized as safe, particularly given evidence which suggests that minute amounts, and single doses, can disrupt the development of the fetus?

Given there is no known safe level of exposure to dioxins and furans, the permit fails to encourage the separation of materials which are likely to lead to the formation of dioxins and furans, like PVC plastic.

The risk assessment process does not allow a full consideration of the existing exposures in a community. According to data available from the Toxic Release Inventory database, in 1994, 112,488 pounds of toxic chemicals were released in the communities immediately surrounding the facility, and another 30,794,450 pounds were transferred in to those communities for disposal. Although these numbers are high, they greatly underestimate the amount of toxins released and transferred into area communities. These existing exposures, as well as historical contamination, must be considered in any real risk characterization.

Finally, the demographics of the area suggest that this

facility will differentially impact low income residents and people of color. Two of the five surrounding communities are well above the State average in the number of minority residents, and four of the five surrounding communities have per capita incomes below the state average. Further, according to the Authority's own analysis, the maximum impact point for annual concentration of PM 10, SO<sub>2</sub>, and NO<sub>2</sub> and the maximum 1 hour concentration for CO all fall in Inkster. Inkster is made up of 64% people of color, who have per capita incomes lower than any of the surrounding communities and well below the state average. Taylor and Westland are also mentioned as maximally impacted communities. Taylor residents are also well below the average State per capita income. Only Westland is above the State average.

Whether or not the intent is to differentially impact low income and minority residents, it is clear that a decision to permit this facility will add to a long list of toxic sources differentially impacting low income and minority Michigan residents.

Risk characterization can't answer the critical question 'do we want this facility in our community'. Many of the contaminants that will be discharged from this facility are highly toxic even in minute amounts, and in some cases, we may already have too many of them in our bodies and breast milk. For dioxins, furans, lead and mercury, and possibly for

other compounds, there is currently no or very little margin for safety. Some evidence suggests that we are already full up with these poisons, and that additional exposure can lead to important and irreversible harm. Given this exposure is avoidable - that is - there are clear, affordable, available alternatives, the risk seems too large. The question the community must ask is NOT How much harm or risk can a person, a child, or a fetus take, but **How much harm and risk can be avoided.** The alternative in this instance represents a substantially reduced risk and a substantially reduced cost to taxpayers. The choice seems obvious.

## Economics Favor Recycling and Landfilling Over Incineration

The cost savings of recycling have been borne out in communities across the United States. A 1992 study (Institute for Local Self Reliance) of 264 recycling programs found that most of them cost less than the disposal alternative, saving their communities as much as \$173 per ton. The data shows that recycling is generally cost-effective once landfill or incineration fees reach \$33 per ton, and that well-designed programs are still competitive with disposal fees as low as \$4-15 per ton. Even though Michigan's lowest-in-the-region landfill tipping fees now push \$13-\$15 per ton, recycling is competitive. And, the \$58/ton Central Wayne fees are no longer comparable.

By making a total capital investment of less than \$5 million, the City of Ann Arbor now recycles 51% of its waste. Each TPD of current processing capacity cost approximately \$43,000 in capital, and that figure has decreased every year since start-up. In contrast, the proposed Central Wayne incinerator would cost \$125,000 for every TPD of capacity, and only then if it received 800 TPD of waste. At its current flow, the facility would cost approximately \$213,000 for every TPD – practically five times the price of Ann Arbor's recycling equipment.

In Ann Arbor's program, high participation rates drive down the per-ton costs, and residential participation in Ann Arbor's program consistently averages between 90 and 95%. The following costs are fully loaded; they include the price of debt service, depreciation, capital replacement, etc. It cost the City of Ann Arbor \$96,000 to process 13,623 tons of material in the 1995-96 fiscal year. That's \$7.07 per ton. It cost the City \$109,000 to compost nearly 11,000 tons of yard waste, for a unit cost of \$10 per ton. The City reaped the benefits of record high recyclable material prices in late 1995, but even over the five-year period 1991-96, Ann Arbor averaged \$10 per ton to recycle, and \$22 per ton to compost. The five-year materials recovery cost was \$15.54 per ton. In contrast, the five-year averaged cost for the City to landfill the other 49% of its waste has been \$35 per ton, and the current cost is \$19.

When all of the collection and transition

costs are taken into account, recycling still turns out to be cost-effective. In Ann Arbor, the City has been able to cut its refuse collection costs in half since the late 1980s, since fewer trucks have been needed to collect less waste. In effect, the garbage trucks have been converted to recycling and yard waste vehicles, almost on a one-to-one basis. In 1990, the City spent \$6.2 million total to handle 54,000 tons of materials – 95% waste and 5% recoverables. In 1996, it spent \$4.2 million to handle 61,000 tons – 49% waste and 51% recyclables. In other words, the system's total costs have decreased by one-third while its throughput increased by 13%.

Finally, there is a jobs benefit from aggressive recycling program. A 1994 nationwide study found that, in addition to the direct costs and job creation of solid waste programs, recycling creates nine jobs and composting seven jobs for every 15,000 TPY of solid waste handled per year. These are "multiplier-effect" jobs, created from the value added to materials by the recovery process, and needed to prepare materials for end-user specifications. Incinerators create two and landfills one job for the same amount of waste handled in those ways.

Incineration has been made doubly uncompetitive in southeast Michigan through the rapid growth of new landfill capacity in the region. Four major landfill projects were approved in Wayne County alone between 1993 and 1995. After seeing a steady 10% per year increase in landfill tipping fees during the late-1980s, landfill prices have dropped more than 30% in the last four years. Tipping fees in our region are now the lowest waste disposal prices in the midwest. The Central Wayne communities could never have predicted this turn of events ten years ago. At that time, landfill prices were expected to continue rising in this region, since permitted space was at a premium.

Today's solid waste disposal market presents financially superior options to incineration. A landfill and recycling strategy, with an aggressive recycling program, could reasonably be expected to save two to three million dollars per year.



# Incineration

Continued from page 7

incineration is becoming less and less competitive (see related story, page 12). Recently, Westland considered withdrawing from the authority, a move which could fatally cripple the incinerator's economics. Westland is the largest city in the authority, and their withdrawal would force the incinerator authority to steeply raise prices to the remaining communities.

Will all of Michigan's waste incinerators close soon? That's not likely, since the world's largest waste burner, the Detroit incinerator, has withstood countless protests and legal challenges, and continues to burn garbage in the city. However, citizen protest and economic reality are turning communities against the big trash burners.

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1/2 cup brown sugar	2 tbsp. flour
1/2 cup rice syrup	3 large eggs
2 tbsp. butter	2 cups pecans

(For an extra gooey treat, add 1/2 cup semi-sweet chocolate chips or 1/4 cup cocoa powder.)

Spread pecans on baking sheet and place in oven for 5 minutes while it is pre-heating. Combine brown sugar, rice syrup & butter until well blended. Add flour and eggs and beat. Add toasted pecans & pour into a crust. Bake for 30 min. at 400.



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