Testimony by Carroll D. Johnston, Oregon PSR member to Oregon DEQ, 12/20/06

Testimony Air Permit Renewal for Covanta Marion, Inc., Waste-to-Energy Facility
Carroll D. Johnston

My testimony about the Waste-to-Energy Facility (WTEF) permit addresses four issues:

1) the continuing absence of any epidemiological or environmental studies of the effect of the toxic emissions on human health or the natural environment downwind from the WTEF,

2) the value of using the accumulation of multiple years of WTEF toxic emissions, as well as the environmental toxins from other sources, as part of the equation to determine what the WTEF permit limits should be,

3) the absence of any monitoring at all for a number of other toxins that are almost certainly emitted from the WTEF, and

4) the unnecessarily high limits set for some toxins.

Lack of Health or Environmental Studies

As I have stated numerous times in past oral and written testimony about permits for the WTEF in Brooks, I continue to be concerned about the health and environmental effects of the incinerator's emissions. I continue to see no evidence that these are being directly addressed by any level of government. Instead there are laws and regulations based on best available control technology, compromises between industry and regulatory agencies, and political decisions that reflect far more concern about economics than health.

We are told that the amounts of toxic pollutants being emitted from the WTEF are well below "acceptable" levels. Yet no epidemiological studies are done to determine whether any of the estimated 94 pounds of mercury emitted into the Willamette Valley air by the WTEF last year might have entered our food chain in the form of highly toxic methyl mercury. We have no ongoing studies of mercury or dioxin levels in the bodies of Willamette Valley citizens or wildlife to establish baselines or to monitor year-to-year changes. We have no attempts to determine whether there is any link between the drastic increase in learning disorders among Salem-Keizer children and the damaging neurological effects of mercury or other pollutants that come from the WTEF.

Use of Cumulative Levels of Toxins to Determine Permitted Emissions

It is my belief that air quality permit limits for the WTEF should be set by taking into consideration not only the potential harmful effects of pollutants that might be emitted in a single year, but also the overall toxic body burden from all sources on citizens downwind from the WTEF, including but not limited to the ongoing potential effects of previous years' emissions. This means, for example, that mercury from industries in China that is being deposited in Willamette Valley bodies of water together with the total tonnage of mercury emitted from the WTEF since it began operating 20 years ago should be considered to decide what might be a reasonable amount of mercury to allow in a new WTEF permit.

Since mercury tends to accumulate in the environment during multiple years of emissions, tends to become transformed into even more toxic methyl mercury as it lies in bodies of

water, and also bioaccumulates in our food chain, it seems only reasonable to consider its cumulative effect over time.

Not only should we consider the cumulative effects of individual persistent bioaccumulative toxins, such as mercury or dioxins, I believe DEQ should also consider the cumulative effects of multiple toxins on individual humans. By that I mean any additive or synergistic effects of various persistent organic pollutants, such as dioxins, from the WTEF combined with benzene emissions from cars, for example. It is the real life effects on human health and the environment that should be considered when issuing permits rather than hypothetical effects of individual, isolated pollutants. As we all know, pollutants in real life don't affect us one at a time. They come in groups.

Monitoring Additional Toxic Emissions

Speaking of cumulative effects of toxins brings me to my third issue of concern. It seems a virtual certainty to me that the WTEF is emitting additional toxins that are not even monitored. A quick search on the Internet reveals additional by-products of waste incineration that are known to be highly toxic. Further research uncovers scientific journal articles that discuss these toxins and their formation. Some of these, such as polychlorinated biphenyls and polychlorinated naphthalenes, have health effects similar to dioxins. See the report at http://www.unece.org/env/popsxg/docs/2005/EU%20polychlorinated%20napthalenes.pdf for a discussion of the latter toxin, for example. (Especially notice section 1.3.2 on page 19 regarding waste incineration as a source.) Even though these toxic chemicals are less potent than the most potent form of dioxin (2,3,7,8-TCDD), they still should be considered in the cumulative effect that they have with other WTEF emissions (just as EPA considers the less toxic congeners of dioxins and furans when calculating toxic equivalents).

Unnecessarily High Permit Limits

In recent news reports I heard that DEQ plans to require the PGE coal-burning electricity plant in relatively unpopulated eastern Oregon to reduce its mercury emissions to 200 pounds per year. It seems incongruous that DEQ would in the same year write a permit allowing over 400 pounds of mercury per year to be emitted by the WTEF in the highly populated Willamette Valley. I also view the dioxin/furan limits as too high, especially given the lack of health impact studies and their very high toxicities.

Public Hearing Request and a Reference

I would like to have additional dialog with DEQ staff and request that a public hearing be scheduled so myself and other members of the public will have an opportunity to do so.

As an additional source of information that will help you understand my concerns about the WTEF emissions, I refer you to a book entitled Waste Incineration: A Dying Technology, which you can read online at http://www.no-burn.org/. Click the book's title along the left margin of the web site to open this hundred-page document.

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