



Thomastown,
Kilcullen,
Co. Kildare
23-4-3

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SUB 100

Dear Dr. Macken,

On behalf of Irish Doctors Environmental Association, I wish to state my firm opposition to the siting of an incinerator in Carranstown for medical reasons, namely that incineration poses unacceptable risks to both the health of the people of Carranstown, and the wider community, both now and in the future.

Specifically, we have concerns in relation to

(i) the emission of particulate fine matter, in the size range 2.5 microns from incinerators.

These are very small particles, which travel very far down the lungs, to the alveoli, where they interfere with oxygen/blood exchange. The United States Environmental Protection Agency has outlined the problems associated with these particles, namely, that when inhaled, they are closely associated with adverse health effects such as increased hospital admissions and emergency room visits, for heart and lung disease, increased respiratory disease, asthma, decreased lung function, and premature death. Sensitive groups that appear to be at greatest risk to these effects include the elderly, individuals with cardiopulmonary disease such as asthma, and children.

These small particles can also carry small particles heavy metals and other toxins down very deeply into the lungs. As far back as 1997, the US EPA added two new PM-2.5 standards, set at 15 micrograms per cubic meter and 65 $\mu\text{g}/\text{m}^3$, respectively, for the annual and 24-hour standards. Furthermore WHO recently adopted a recommendation to use fine particulate matter 2.5 as an indicator for pollution induced health effects. We have no guidelines in Ireland for the regulation of these particles, and the issue was not addressed in the Health Research Board's report.

(ii) the emission of varied chemicals, which will be emitted from the stack.

Essential prerequisites for risk assessments of emissions from waste incineration are, actual, continual and comprehensive qualitative and quantitative analytical knowledge of the composition of emissions; region-specific meteorological dispersion models of the emissions particulate; and evaluation of the complex mixtures in emissions for their kinetics in and toxicity for ecosystems and humans. None of these criteria has so far been fulfilled. In particular, incineration greatly enhances the mobility and bioavailability of toxic metals present in municipal waste incineration.

There are no formal air quality guidelines for many chemicals, of which we know little about. The European Environment Agency has said that there is insufficient evidence for 75% of the 100,000 chemicals on the European Market. Many of these chemicals released by incinerators are persistent,

bioaccumulative and toxic. There may well be a long latency period before any of these adverse effects are seen.

One of these chemicals is dioxin. Children exposed to dioxin, during critical periods of development, while still in the womb, appear to be the most sensitive and vulnerable to this fat-soluble chemical, which is classed as a carcinogen. It is also of significance that the protective blood brain barrier is not fully developed in babies until they are approximately six months old. This has serious implications for the health of unborn children and young babies, as many of these chemicals, including dioxin are fat soluble, and the brain is largely composed of fatty compounds. A recent Belgian study found that continuous monitoring, as opposed to the usual intermittent method, underestimated dioxin releases by between 30 and 50 times.

The recent Health Research Board report states, '*incineration is associated with respiratory morbidity*'. '*further research, using reliable estimates of exposure, over long periods of time, is required to determine whether living near landfill sites or incinerators increases the risk of developing cancer*'. The Health Research Board's report further states that '*Irish health information systems cannot support routine monitoring of the health of people living near waste sites*'.

If we cannot say that incineration is safe and furthermore, that we have no way of monitoring any ill-effects, then surely, we should not use this method of waste management. Lack of evidence of adverse health effects from 'new' incinerators should not be taken to mean that there are no adverse health effects from them. Modern does not mean right. References available on request.

I would be grateful for your opinion on this matter. Thank you

Kind regards


Elizabeth Cullen
Irish Doctors' Environmental Association

