ENOUGH IS ENOUGH

Statement

On

Proposed Two Incinerators

Prepared by:

Ringaskiddy And District

Residents Association Ltd,

Ringaskiddy,

Co. Cork.

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Introduction

This document has been prepared in response to the proposal by a private company namely Indaver Ireland to establish **two incinerators** at Ringaskiddy Co. Cork.

Purpose of Report

This purpose of document is to summarise the findings of the research which has been completed to date.

Background Information

Over the past 30 years Ringaskiddy and surrounding areas have been transformed as a result of a policy of industrialisation in the area. The siting of a number of high profile multi national companies primarily active in the pharmaceutical sector has, on balance, been welcomed by the majority of the residents in the area.

At the time that Ringaskiddy was selected by the IDA for the development of the pharmaceutical industry, the local community were assured by the IDA that only pharmaceutical industries would be permitted to operate in the area, as these industries were sensitive to the requirements of a clean environment, since the products would be exported to world markets.

Retaining the specialised nature of the industries permitted to set up in Ringaskiddy was intended to encourage further pharmaceutical companies to come to the area. The presence of 2 additional large incinerators in Ringaskiddy would be a serious deterrent to other industries coming to the area.

The community has had to make a significant sacrifice to accommodate industry resulting in a reduction in the quality of life previously enjoyed. The residents of Ringaskiddy and surrounding areas have willingly made this sacrifice because of the benefits which would and have accrued to other communities in Cork and Munster.

Now a private company, primarily motivated by profit, seeks to impose a facility in the form of ***two incinerators*** onto the people of Cork and Munster. The Ringaskiddy and District Residents Association have examined this proposal and believe that the proposed two incinerators have the potential to;

- Seriously harm peoples health.
- Harm the environment,
- Harm businesses active in the Cork and Munster region.
- Harm the farming community.
- Harm the tourist industry.
- Put jobs at risk.
- Endanger the quality of the pharmaceutical products exported from Ringaskiddy

As a community we are not prepared to accept the risks associated with this project and are not prepared to see the benefits which have accrued to other communities be jeopardised. Our reasons for opposing the project are based completely on common sense – not on emotion. This is why we say 'enough is enough'. ***The proposal by Indaver to establish two incinerators must be stopped.***

Structure of Report

In preparing this report the Ringaskiddy Residents Association have focused on a number of critical issues and these are;

- The effects of incineration on human health.
- A comparison of Indaver Ireland's proposal for Carranstown Co. Meath with its proposal for Ringaskiddy.
- The effects of incineration on the environment in the surrounding communities.
- Waste management in the future.
- The history of Ringaskiddy

The report is structured accordingly.

Summary of Findings

The following is a summary of the findings of the research undertaken to date.

Health Considerations

- A broad range of health effects have been associated with living near to incinerators as well as working at these installations.
- Modern incinerators still emit large quantities of toxic chemicals into the atmosphere. Where reductions in emissions have been achieved it results in the same compounds ending up in the ashes residue.
- All incinerators release pollutants into the atmosphere in stack gases, ashes and other residues. Many of the chemicals released are known to be very resistant to degradation in the environment and toxic.
- People residing near to incinerators are potentially exposed to chemicals through inhalation of contaminated air or by consumption of contaminated agricultural produce.
- An important scientific paper has appeared recently in **Lancet 2001: 357: 1660-1669 (**published on May 26th) which showed that direct measurements of the effects of pollutants in the human is more appropriate than extrapolations from the levels which are released into the environment. Many of the pollutants accumulate and cause long-term effects. This is a landmark report and merits serious consideration as it affects everyone's future health.

Indaver's Proposals for Ringaskiddy

- The Ringaskiddy and District Residents Association has obtained a copy of the company's Environmental Impact Statement for the Carranstown facility. Examination of this statement and supporting documents raises serious concerns and questions on a number of grounds.
- Indaver's application to Carranstown, Co. Meath attaches importance to locating an incinerator in an ***area of low housing density*** and in what is described as agricultural land. If this was a consideration and the company's recommendation for Carranstown, **Why is Ringaskiddy selected when it has residential housing near by?**
- There is a large population (e.g. Cobh, Midleton, Monkstown, Rochestown, Douglas and Carrigaline) in direct line of exposure to any smells, emissions and pollutants from the two plants which Indaver propose to erect.
- The proposal to put two incinerators near to the pharmaceutical industry puts the entire industry at risk from contamination.
- Documentation from Carranstown attaches importance to having a ***flat terrain on which to build***. The proposed site in Ringaskiddy ***is on the corner of a hill.***
- In Ringaskiddy there is no natural barrier between the proposed site and the housing in Monkstown, Ringaskiddy and Cobh. What ever the fallout will be near to the plant, this will be carried directly to private housing.
- On page 7 of Indaver's document for Carranstown it is stated *"standards met in* ***almost all*** *Indaver plants"*. This is not a reassuring comment. What is the reason for the qualification? What are we not being told?
- Domestic waste can contain rotten meat and food products, disposable nappies, colostomy bags, dead animals and birds and a variety of plastic and synthetic materials, all of which provide the ideal medium for the spread of diseases to both animals and man and the production of toxic pollutants when burned. This is all the more important when one considers the distance involved in transporting waste and the delay periods involved in compacting and making an economic load for a transport vehicle.
- Moving waste around the country appears an ideal way to spread disease. Having seen the precautions taken by the Department of Agriculture to control the spread of Foot & Mouth Disease recently raises the question of the spread of animal diseases and the associated costs to the nation of moving waste over long distances. There is no control anywhere on what goes into waste containers.
- Indaver stated in its literature relating to its proposal for Ringaskiddy ***"Indaver guarantees that the proposed facility at Ringaskiddy will operate to 10% of the new EU limits for emissions for Dioxins and therefore will emit only 0.012gr.of Dioxin per annum".*** The literature gave the same levels at Carranstown but Indaver have failed to point out that it plans ***two plants*** for Ringaskiddy with double the total capacity of the plant at Carranstown. Emissions for each plant should

therefore be 5% of the EU standard. Not as Indaver have stated. ***The literature is therefore trying to deliberately mislead the people of the area, presumably the same information was issued to Cork County Council.***

- What method will Indaver use to monitor the group of dioxin chemicals and metals from the two incinerators? The company already have plants in operation, which Indaver claim to be operating to low emission levels, therefore the company has analytical data on the precision and accuracy of the methods which are used and the frequency of sampling.
- Ash from an incinerator could constitute an even greater risk than emissions from a stack. In Carranstown, Indaver proposed dumping this in a wet form in landfill sites. What does Indaver expect to happen to the ash once it had drained out and dried? This constitutes a ***double danger*** from windblown ash particles and from water dissolving metals from the ash and entering rivers or drinking water over time.
- Where does Indaver plan to put the 37,000 tonnes of ash residue from the toxic incinerator in Ringaskiddy and where will the landfill site be for the 37,000 tonnes of ash residue from the "non toxic waste incinerator"?
- The proposed plant will run by taking in a variety of materials, the exact nature and the mix of materials will be unknown to the company's operators and the operation of the plant will be totally dependent on the company's detectors showing that the facility is operating within the 5% of the EU limit. What are the company's contingency plans for when the limits are exceeded? Where will waste be stored if the plant is not operating? Will transporters be parked up in lay-bys or towns or villages until the plant is within limits while the cargo continues to ferment and smell? How does Indaver plan to store waste, which is already on site while the plant is out of the control limits?
- Why is Indaver preparing to process paper when neither the country nor the industry requires it? It is adding to environmental pollution in another part of the country. The cost of collecting and transporting waste paper to Ringaskiddy will be a colossal cost to the Irish taxpayers if no company will find it economical to process the reclaimed paper.
- Indaver's literature suggests a development of two incinerators which will have a combined output of 74,000 tonnes of ash material to be disposed. Will it be acceptable to the Building Standards Specifications Authority for inclusion in building materials as Indaver's literature suggests? Has this got approval?
- From the Carranstown document Indaver list the number of cars using the roads in the construction period between 7-8 in the morning as 250 with an additional 50 day of service and delivery vans. With a two phase plan for Ringaskiddy this would mean that this is ***additional traffic for several years.*** Added to this would be cars going to the Community Waste Collection Area which in the trial in Navan was 3000 cars per month (i.e. 100 per day) from an area which is largely agricultural. Indaver's calculations of population shows less than 200,000 people in the surrounding area. An even greater number of car journeys could be anticipated from a populated area such as Cork lower harbour.
- Indaver literature refers to studies performed by the EPA on levels of Dioxins in milk from cattle in the vicinity of incinerators as evidence of safety. These figures have to be treated with caution. Not all of the material ingested by cattle ends up in milk. High levels of ingested materials can be excreted by animals in urine and faeces or accumulated in animal tissues. This EPA study probably gives reassurance to the ignorant. It cannot be regarded as evidence for anything. If inappropriate sampling procedures are used then one finds what one wants to find.
- When the accident happened at Chernobyl, radioactive material was spread over Europe and found on the mountains in Wales. When one looks at the distances involved and possible dilution factors involved as air moved from Chernobyl to Wales, one has to ask about the exposure of the communities of Cobh, Ringaskiddy, Monkstown, Carrigaline Rochestown, Douglas, Cork City, Midleton and the entire area of East Cork to emissions from the plant. The houses in both Monkstown and Cobh are at a higher elevation than any chimney in your plant. With the prevailing winds, which frequently are strong, all of the emissions will blow directly into the houses in direct line with the prevailing winds. The modelling on distribution from a stack carried out by Project Management for you at Carranstown has to be regarded as a model, to take it as a prediction of what may happen in Ringaskiddy would be a serious error.
- Does Indaver have an agreed contingency plan with the Health Authority and Cork County Council to deal with the resulting incidence of respiratory ailments that could reach increased levels in these communities?

Section 1
***Effects of Incineration on Human Health*.**

Information relating to the effects on incinerators on human health has been generated from the most recent publications on the topic. This is briefly outlined below.

1. 1 Research Completed at the University of Exeter

The publications entitled *"State of Knowledge of the Impacts of Waste Incinerators on Human Health"* published in March 2001, authors Michelle Allsopp, Pat Costner and Paul Johnston of the University of Exeter UK highlights the following key points:

- It is now established that a broad range of health effects have been associated with living near to incinerators as well as working at these installations. Such effects include cancer (among both children and adults), adverse impacts on the respiratory system, heart disease, immune system effects, increased allergies and congenital abnormalities.
- Modern incinerators still emit large quantities of toxic chemicals into the atmosphere, and where reductions in aerial emissions have been achieved it usually results in the same compounds ending up in the ashes.
- All incinerators release pollutants into the atmosphere in stack gases, ashes and other residues. Many of the chemicals released are known to be very resistant to degradation in the environment and toxic.
- Populations residing near to incinerators are potentially exposed to chemicals through inhalation of contaminated air or by consumption of contaminated agricultural produce (e.g. vegetables, eggs, and milk) from the local and by contact with contaminated soil. Significantly increased levels of dioxins have been found in the tissues of residents near to incinerators in the UK, Spain and Japan most likely as a result of such exposure.

A detailed summary of studies on the effects of incineration on occupational health and populations living in the vicinity of incinerators in provided in Appendix 1.

1. 2 Lancet Medical Journal

An important scientific paper has appeared recently in **Lancet 2001: 357: 1660-1669 (**published on May 26th) which showed that direct measurements of the effects of pollutants in the human is more appropriate than extrapolations from the levels which are released into the environment. Many of the pollutants accumulate and cause long-term effects. This is a landmark report and merits serious consideration as it affects everyone's future health.

The study on 17 year old students in Belgium shows that children who grew up near to incinerators had much higher levels of pollutants (dioxins, PCB , VCOs and lead) in their blood and urine than a control group of students in a rural community. Among the effects seen were retarded sexual development in girls and retarded testicular development in boys. The dioxins can mimic estrogens in women and exert anti androgen in males. Early changes were seen also in glomerular filtration rates in the exposed groups which correlated with the levels of lead in blood. Lead on its own leads to serious health problems for children with mental retardation being a notable effect. The changes in the group in Belgium by any standards has to be could be an indicator of possible major health problems in the future.
A major conclusion was that monitoring the effects in the human body is more meaningful than the simple measurement of chemicals in the environment since many of the pollutants accumulate in the body especially with small children and young people in the active growing stage.

A description of the study, its findings and the overall conclusions and a suggestion that we should begin in Ireland to embrace better technology in dealing with waste rather than burning has been prepared by Richard Palmer, Ph.D., C.CHEM MRSC. The full text of Dr. Palmer's review in included in Appendix 2.

The report in Lancet and other studies are wake up calls to those responsible for public health that now is the time for action before chasing down a disaster alley and then having to do it correctly later at even greater costs.

Section 2
Preliminary Examination of Indaver Ireland's Proposal for Ringaskiddy.

Indaver Ireland intends to establish two incinerators in Ringaskiddy. The company has already applied for planning permission to establish an incinerator at Carranstown Co. Meath. The Ringaskiddy and District Residents Association has obtained a copy of the company's Environmental Impact Statement for the Carranstown facility. Examination of this statement and supporting documents raises serious concerns and questions on a number of grounds. These are outlined below.

2. 1 Location

Indaver's application to Carranstown, Co. Meath attaches importance to locating an incinerator in an ***area of low housing density*** and in what is described as agricultural land.
If this was a consideration and the company's recommendation for Carranstown,

- Why is Ringaskiddy selected when it has residential housing near by?

There is a significant amount of residential housing in Ringaskiddy, Shanbally, Coolmore, Currabinny and Carrigaline. Furthermore the proposed site is adjacent to factories which produce medical products and housing facing the prevailing winds in Monkstown, Haulbowline and Cobh. This housing is higher than any stack which the company can have and it is facing directly into the wind from your proposed site .There is a flat water surface in between.

The Irish Navy base is nearby and the proposed Maritime Institute is planned for the immediate proximity to your site.
Do the humans who live and work in these places account for anything?
Irrespective of how the compass rose will show wind directions relative to areas where people live or work, there is a lot of turbulance in the area which your company has selected.

There is therefore a large population in direct line of exposure to any smells, emissions and pollutants from the <u>two plants</u> which Indaver propose to erect.

2. 2 The Pharmaceutical Industry

The pharmaceutical industry in the area makes final dose forms of drugs and the company Du Puy which makes medical devices ***is directly in line with wind from a Northerly direction.***
There are no filters available to filter out chemicals from contaminated air, their best filters will only stop viruses.
The proposal to put two incinerators near to this industry puts the entire industry at risk from contamination. If the pharmaceutical industry has a major contamination in a product or in a process which can be attributed to the presence of an incinerator complex nearby it will mean that the area becomes totally unsuited for the manufacture of medical products. Either the incinerator or the pharmaceutical industry has to close.
It is irresponsible for any representatives to approve a waste management facility so close to a sensitive industry.

The local industry probably does not object as they see it as a possible cost reduction for them in disposing of toxic waste, it should be pointed out that if they ever have a law suit for a contaminated product the blame will rest entirely at Indaver's doorstep. Their history to date has not shown a contaminated product but for the future any failures will be attributed to your operation. Final dose forms have only recently been produced there.

2. 3 Site Selection

Documentation from Carranstown attaches importance to having a ***flat terrain on which to build***. The proposed site in Ringaskiddy ***is on the corner of a hill*** which has wind coming to it from across an expanse of water, some of this air will rotate and spin as it hits the elevated land mass behind and above your chosen site.

This will be a site with very turbulent wind patterns, it is well known by the fishermen of the village that Southerly wind causes squalls will blow directly along the front of the village, that is a major change in direction of the wind as a result of the land behind the village.

2. 4 Ground Level Contamination.

The modelling experiments performed on Indaver's behalf by Project Management showed maps of the expected levels of pollutants at different distances from the plant. It should also be borne in mind that **Indaver are proposing two incinerators in Ringaskiddy** so that one is considering a much bigger facility than that at Carranstown.

The modelling of fallout for Carranstown will show that the fallout from even a single plant can extend to a long distance from a stack, **with two incinerators this area of fallout will be further enlarged**. These computer models make assumptions on wind speed and direction and make no allowance for downdraughts from hills**.** In Ringaskiddy there is no natural barrier between the proposed site and the housing in Monkstown, Ringaskiddy and Cobh.
What ever the fallout will be near to the plant, this will be carried directly to private housing.
Therefore the ground level fallout will be additive to total emissions from the stack and community recycling area will reach Monkstown and Cobh across the water and expose the residents there to the full levels of all emissions.
This is a reckless disregard for the health and well-being of the residents and workers in this area of the harbour.

2. 5 Environmental Monitoring

Many of the residents in Ringaskiddy and the environs are connected with or are employees in the chemical and pharmaceutical industries in the area.
The residents are not impressed by Indaver's assurances that the EPA will monitor the plant.
This is regarded as a sick joke!

People can relate instances of ***major deviations*** in the industry with the disposal of waste, disposal of washings from containers, spillages, label changes, errors by operators in opening wrong valves, and incinerators which on occasions ***exceed the permitted emission levels.***
These are instances in companies, which have written procedures and claim to meet all standards on paper.
Experience from the plant now occupied by Warner Lambert/Pfizer shows that despite written procedures **major accidents occur.**

There are memories of the assurances given with an incinerator in Tipperary, which resulted in the deaths of cattle and the defamation of the farmer concerned.
Initial studies were supported by so called experts when the whole exercise was shown to be bogus and incompetent. People have not forgotten that.

Expediency rules when it comes to solving a problem at the ground floor. ***Indaver's assurances are therefore regarded as worthless***, it is what the company's operators do that matters - not what the management writes in glossy leaflets**.** Ringaskiddy has seen it all before.

On page 7 of Indaver's document for Carranstown it is stated *"standards met in **almost all** Indaver plants"*.
This is not a reassuring comment.

- What is the reason for the qualification?
- What are we not being told?

2. 6 Toxic Waste and Waste

While Indaver's literature follows the definitions laid down for the categories of waste materials, it should be emphasised that ***all waste is potentially hazardous*** when one considers the type of materials collected as part of domestic refuse. Domestic waste can contain rotten meat and food products, disposable nappies, colostomy bags, dead animals and birds and a variety of plastic and synthetic

materials, all of which provide the ideal medium for the spread of diseases to both animals and man and the production of toxic pollutants when burned.

This is all the more important when one considers **the distance involved in transporting waste and the delay periods involved in compacting and making an economic load for a transport vehicle.**

Without going into details on the elements in toxic wastes, one only has to go to a municipal landfill site to see the variety of items, which come from domestic waste and the resulting smells.

2. 7 Spread of Diseases

The collection of newspapers in Cork City at a time when new churches were being built was implicated in the spread of polio in the city. Paper collection was stopped as a public health measure. The polio epedemic also simultaneously decreased.

Moving paper and domestic waste around the country appears an ideal way to spread disease .
Having seen the precautions taken by the Department of Agriculture to control the spread of Foot & Mouth Disease recently raises the question of the spread of animal diseases and the associated costs to the nation of moving waste over long distances. There is no control anywhere on what goes into waste containers.

All waste is potentially hazardous and should be treated accordingly. Domestic waste can be more dangerous than industrial waste.

2. 8 Emission Levels:

Indaver stated in its literature relating to its proposal for Ringaskiddy ***"Indaver guarantees that the proposed facility at Ringaskiddy will operate to 10% of the new EU limits for emissions for Dioxins and therefore will emit only 0.012gr.of Dioxin per annum".***
The literature gave the same levels at Carranstown but Indaver have failed to point out that it plans ***two plants*** for Ringaskiddy with double the total capacity of the plant at Carranstown.

Emissions for each plant should therefore be 5% of the EU standard. Not as Indaver have stated.

The literature is therefore trying to deliberately mislead the people of the area, presumably the same information was issued to Cork County Council .

- ***With a written guarantee like this in its literature, can Indaver confirm that this 5% of the EU standard will be an agreed operating specification with the County Council, with the Environmental Protection Agency and the residents of Cork and that when the company fails to meet that specification that it will not retreat behind the higher EU limits?***

It also necessary to establish the methods which Indaver propose to monitor emissions and in particular Dioxins. The company already have plants in operation, which Indaver claim to be operating to low emission levels, therefore the company has analytical data on the precision and accuracy of the methods which are used and the frequency of sampling.

- What method will Indaver use to monitor the group of dioxin chemicals and metals from the two incinerators.

Information from Carranstown refers to ***continuous monitoring*** – presumably Indaver will offer the same in Ringaskiddy.

- How does Indaver propose to have this done for dioxins and metals?
- If it is periodic monitoring , what are the time points for the analyses?
- Indaver literature refers to studies performed by the EPA on levels of Dioxins in milk from cattle in the vicinity of incinerators as evidence of safety.

These figures have to be treated with caution. For example, the concern is the emission of Dioxins through a chimney into the atmosphere in hot gasses, thus the emissions are carried higher into the air

and never get near the ground in the "immediate vicinity of the incinerator." This study design was a carry over from radioactive studies around Nuclear Plants in the UK where contamination came from regular vents and extract fans and the radioactive material which is metallic was deposited as particles on the ground and grass. Hot spots were identified in contaminated areas.
The radioactive material is easy to measure even at very low levels.
Furthermore not all of the material ingested by cattle ends up in milk. High levels of ingested materials can be excreted by animals in urine and faeces or accumulated in animal tissues.
This EPA study probably gives reassurance to the ignorant. It cannot be regarded as evidence for anything. If inappropriate sampling procedures are used then one finds what one wants to find.

2. 9 Ash Disposal

Ash from an incinerator, much of which had been deposited in finely divided form on filters could constitute an even greater risk than emissions from a stack.

In Carranstown Indaver proposed dumping this in a wet form in landfill sites. What does Indaver expect to happen to the ash once it had drained out and dried? This constitutes a **double danger** from windblown ash particles and from water dissolving metals from the ash and entering rivers or drinking water over time.

- What is the plan for ash from Ringaskiddy?
- If the ash is mixed with cement, where is the data and time experiments to show that the ash is totally and permanently attached to inert cement particles and there will be no leaching from the materials?
- Where is the data for crushed cement bound ash? In a landfill, compacting machines will crush everything under the wheels and drag lines.
- If this material becomes used for road construction it will therefore undergo wear from vehicles which will give rise to fine particles in road dust, these particles will have high concentrations of metals and toxic chemicals.

2. 10 Land Fill Site

Indaver's brochures from Carranstown state that there is ***"no landfill site in Ireland for toxic waste"***

- Where does Indaver plan to put the 37,000 tonnes of ash residue from the toxic incinerator in Ringaskiddy?
  and
- Where will the landfill site be for the 37,000 tonnes of ash residue from the " non toxic waste incinerator"?

Indaver's literature is only giving part of the story and because of these omissions one has to assume that there is much more not being disclosed .

2. 11 Operating Contingency Plans

The plant will run by taking in a variety of materials, the exact nature and the mix of materials will be unknown to the company's operators and the operation of the plant will be totally dependent on the company's detectors showing that the facility is operating within the 5% of the EU limit.

- What are the company's contingency plans for when the limits are exceeded?
- Will violations be just notified to the EPA and the company will carry on as before?
- In the event of the operation exceeding the agreed limits, does the toxic material and waste get accumulated on the site in Ringaskiddy until the limits can be achieved in the plant?
- Will Ringaskiddy be a great dump for rubbish?
- What happens to the tankers and lorries, which are already on their way to your plant from, places as far away as Donegal which are carrying either toxic chemical or general domestic waste?
- If the plant fails for a time, what does Indaver expect transporters to do with toxic materials especially since they can only be stored in approved sites?

- Will these transporters be parked up in some lay-bys/towns/villages until the plant is within limits while the cargo continues to ferment and smell?
- How does Indaver plan to store waste, which is already on site while the plant is out of the control limits?
- If the Community Recycling Park gets to capacity, will waste be thrown on the ground as happens with public landfill sites where waste is deposited outside when the tip is closed?

2. 12 Recovery of Waste Paper

The Cork County Council document for waste management makes reference to the difficulty of selling recovered paper. Reports in the UK and USA within recent years have concluded that it is uneconomic to reprocess paper since virgin paper pulp can be sourced from sustainable forests and at a cheaper price than reprocessed paper.

Furthermore in the processing of used papers strong chemicals have to be used to remove the print and colours, disposing of these chemicals constitutes a further pollution problem. These will be water-soluble chemicals, which are less amenable to incineration.

From the two comprehensive studies published it was concluded that the only benefit of paper collection is to make the population aware of environmental issues and to make people feel that they are contributing to the good of the environment by collecting paper. There are no other benefits, so why is Indaver preparing to process paper when neither the country nor the industry requires it? Furthermore it is adding to environmental pollution in another part of the country.
The cost of collecting and transporting waste paper to Ringaskiddy will be a colossal cost to the Irish taxpayers if no company will find it economical to process the reclaimed paper and to cover the cost of the resulting environmental problems with chemical disposal. It is difficult to make the collection and reprocessing of paper an economical business even from a concentrated area such as a big city, much less from rural Ireland.

2. 13 Plant Capacity and resulting Road transport

Indaver's literature suggests a development of a plant initially with a 100,000 tonne capacity (followed by a second plant of similar capacity) as input and a combined output of 74,000 tonnes of ash material to be disposed,

- Where will this material go?
- What will this material consist of?
- Will it be immobilised so it not carried by the wind or leach into the sea or ground water?

This material will by its nature have a lot of variation depending on the initial source of the ash;

- Will it be acceptable to the Building Standards Specifications Authority for inclusion in building materials as Indaver's literature suggests?
- Has this got approval?

It is well recognised that the duration and strength of concrete is very dependent on the concentration of inorganic materials in the mixture, concrete made with sea sand gets notoriously brittle and disintegrates after a few years. This is why communities near the sea never use sea sand for making concrete.

The company's schematic of the processing plant shows a hopper, which dispenses cement on to the ash;

- Does Indaver have information on the leaching of materials from the cement/ash mixture?
- What are the contingency plans for disposal of ash when landfill sites are no longer available? Company literature says that they are decreasing in Ireland.
- With a capacity of 100,000 x 2 tonnes input and an output of 37,000 x2 tonnes from the plant, how many road journeys to and from Ringaskiddy does this represent?
- How many journeys will be made by cement lorries in the course of a year?
- Does Indaver intend bringing in waste by sea directly to Ringaskiddy?
- Does Indaver intend bringing in waste from abroad for disposal?

From the Carranstown document Indaver list the number of cars using the roads in the construction period between 7-8 in the morning as 250 with an additional 50 day of service and delivery vans.

With a two phase plan for Ringaskiddy this would mean that this is additional traffic for several years.

Added to this would be cars going to the Community Waste Collection Area which in the trial in Navan was 3000 cars per month (i.e. 100 per day) from an area which is largely agricultural. Indaver's calculations of population shows less than 200, 000 people in the surrounding area. An even greater number of car journeys could be anticipated from a populated area such as Cork lower harbour.

2. 14 Washing of Containers

- Will containers that held waste (either chemicals or solids, toxic or non toxic) be washed down with water either into the land or the sea?
- What will happen when the inevitable spillage occurs?
- Will the washings be recovered or will Indaver follow the common practice of putting everything into the Harbour?

2. 15 Exposure in Local Communities

When the accident happened at Chernobyl, radioactive material was spread over Europe and found on the mountains in Wales. When one looks at the distances involved and possible dilution factors involved as air moved from Chernobyl to Wales, one has to ask about the exposure of the communities of Cobh , Monkstown and Ringaskiddy to emissions from the plant. The houses in both Monkstown and Cobh are at a higher elevation than any chimney in your plant. With the prevailing winds, which frequently are strong, all of the emissions (be they from the incinerator, discharge of trucks, and community recycling park) will blow directly into the houses in direct line with the prevailing winds.

The modelling on distribution from a stack carried out by Project Management for you at Carranstown has to be regarded as a model, to take it as a prediction of what may happen in Ringaskiddy would be a serious error.

- Does Indaver have an agreed contingency plan with the Health Authority and Cork County Council to deal with the resulting incidence of respiratory ailments that could reach increased levels in these communities?

2. 16 Road Traffic resulting from Two Incinerators

Indaver must be able to provide figures on the following:

- How many return trucks/tankers trips per year will travel through the village in delivering waste?
- How many return truck trips per year will be used to take away the 35,000 tonnes ash for dumping?
- How many cement tankers per year will deliver to your plant?
- How many trucks will transport away the recovered paper?
- How many trips will be made to remove salvaged metal?
- How many car/van/ refuse collection vehicles per year will visit the Community Recycling Park?
- During the construction phases can the figures for Carranstown be used so as to get a total figure of the traffic to and from Ringaskiddy?

It has to be assumed that all employees will come to the plant each day by car (as evidenced by the traffic to the existing industries and the driver only occupancy of these cars) that your plant will give rise to a further 50 cars per day through the village. Is this a reasonable estimate?

2. 17 Wind Patterns

The proposed site for the incinerator in Ringaskiddy is on the lee side of a hill. Further to the south west there is a large landmass from Camden running west. The prevailing winds come over this land mass and as they drop over Crosshaven,Currabinny Wood and the hill behind Ringaskiddy again distort them.

The wind direction through the village of Ringaskiddy can be very different in direction from the wind as it strikes the initial landmass, southerly wind that on a map should be seen to blow over Ringaskiddy towards Rushbrook, results in squalls of wind blowing directly along the front of the village.

In view of the turbulence in the wind patterns around Ringaskiddy and the close proximity of Indaver's proposed plant to the pharmaceutical companies in the neighbourhood it is going to be very difficult for them to operate in a clean environment.
Specific conditions necessary for pharmaceutical production in terms of air filtration, sterile rooms, and laminar flow and Hep air filters etc. and the precautions that are taken to ensure a non contaminated product. However all of these systems operate better if they are not subjected to a constant challenge from environmental contaminants. They only need a single breakdown and this will result in a major disruption and loss of material.
They have no protection from air borne chemicals.

Not all of the pharmaceutical raw materials are stored in filtered air environments, neither do the staff work in sterile areas.

2. 18 Waste Prevention

Indaver company literature claims that you are also concerned about waste prevention yet the company's contribution to Carranstown was to distribute literature.
What will positive contribution will Indaver make to waste prevention in Cork?

2. 19 Conclusions

- Major inconsistencies exist with regard to the criteria used by Indaver Ireland to justify its selection of Carranstown, Co. Meath and Ringaskiddy, Co. Cork.
- The proposed two incinerators will put the industry currently located in the area at risk.
- Emissions from the two incinerators will directly effect a large population base in Cobh, Monkstown, Ringaskiddy, Rochestown and Midleton to name but a few areas.
- The proposal two establish two incinerators demonstrates reckless disregard for the health and well-being of the residents and workers in this area of the harbour.
- Ash from an incinerator could constitute an even greater risk than emissions from a stack.
- Indaver have failed to address critical operational conciderations.
- Literature supplied by Indaver with regard to the company's proposals for Ringaskiddy is trying to deliberately mislead the people of the area, presumably the same information was issued to Cork County Council.

Section 3
Effects on the Environment

In a paper recently prepared and published by Allan J. Navratil B.Sc., Env. Sc., Ren. Energy., Dip. Geol. the author highlights the negative effects of combustion of waste on the environment. The following extracts from the paper are worthy of consideration.

Combustion of hazardous waste….exploits the earth's fragile atmosphere as a readily accessible rubbish dump and at least has grave medical, biological and ethical implications. Furthermore not only is there an inevitable operational risk factor but also the issues of unsustainability and transgenerational equity are concomitant factors.

Mr. Navratil highlights the following key points in his report;

- Substantial funding is required for a multi-disciplined enquiry.
- Full analysis of alternative technical methodologies and a stay on promotion of project until such is completed.
- A comprehensive base line study required.
- Government and Local authority involvement needed in the above to ensure implementation in full of the findings.
- Independent economic analysis is needed to identify the driver of a principal that moves waste to one corner of Ireland and also concentrates hazardous wastes in a small but sensitive premium area.
- An undertaking must be forthcomimg from the Company, if and before the plant is ever built adequately to fund
  (a) professional continuous 24 x 365 day monitoring over the fallout area,
  (b) legal and other expenses in the event of any problem arising
  (c) a continuously funded public liability policy or bond sufficiently large (£1bn+) to cover personal risks and potential economic property loss through diminution of value either by normal function, acute malfunction or chronic degradation of environment.

Section 4
The Future for Waste Management

It appears that Ireland as a nation has a waste management problem. Indaver being motivated by profit are simply endeavouring to exploit a commercial opportunity. However incineration is not the solution in fact it will create more problems then it will solve.

Universally there is a movement away from waste management by burning, it does not solve problems but in many ways makes resulting problems more difficult to correct. One of the comments in the Carranstown document implied that landfill gave rise to methane gas. Methane can be collected and it is a product of break down of organic material in nature whether in landfill or not.

The European Community and the US-EPA are working towards waste management without burning and it is claimed that within 20 years incinerators will be banned from use.

The approval of incinerators is therefore only postponing the day when the correct technology which will include waste reduction has to be put in operation in Ireland.

Why cannot the correct decisions be taken now? It is not rocket science!

In the meantime damage will be done to the environment in the country and the health of the nation and managed landfill will still have to take place.

Section 5
History of Ringaskiddy

Introduction

Ringaskiddy has been identified as the proposed location for ***two 100,000 ton per annum incinerators*** to be built by INDAVER. This announcement was made in the early part of 2001and the reaction within the community to this proposal has been one of shock and disbelief. While a disclosure of this nature would have shocked any community given the opposition to incinerators on not alone a national scale but increasingly on a global scale, the impact on the Ringaskiddy area was far times worse. The reason for this lies in the trauma suffered by the community by the massive industrialisation of the region since 1970. The community acknowledges that a large number of people benefited from the jobs created by this industrialisation. However there is complete ignorance on behalf of most people from outside the area of the trauma suffered by the community as a result of this industrialisation.

We therefore tried to give people a better understanding of the effects this had by documenting a brief history of the area from the pre industry era to the present.

We hope that the planners, legislators, politicians will be better enlightened having read this document and will understand and appreciate the major sacrifices that the community has already made in the common good and national interest.

We also expect you to understand that this community has presently done more than enough in this regard and that further proposals of this nature can not be justified on any grounds.

Ringaskiddy - A Social History

Ringaskiddy, with rich arable farmland and abundant fisheries coupled with a strategic location in lower Cork Harbour, was a center of settlement form the earliest ages. Today the evidence is still visible in the remains of a massive kitchen midden of oyster shells in the shoreline near Curribinny Wood indicating that the harbour played an important role in food provision for the early settlers. Ring-forts, a characteristic Irish form of farm settlements in the first millennium, are still to be seen in many parts of the district. Indeed the townland of Raffeen -An Rath Mhin- means ringfort on the level ground and to this day the outline of a ringfort is still visible on the only patch of level ground of the otherwise hilly soil. In the Christian era a monastery was founded by St. Carthage in Ballybricken (now the site of Pfizer/ADM). The townland was called after one of his followers St. Bracken (Bailebracken - now Ballybricken). St. Bracken built one of the first churches in the locality on the site of the present Barnahely graveyard. Its remains can still be seen there. It was inevitable, give its maritime location and its monastic settlement, that the area should attract the Norsemen who subsequently founded a settlement in Ringaskiddy. Down through the ages the community found employment and livings from both sea and land up to modern times.

Livelihoods and Employment

At the turn of the last century the people of Ringaskiddy and adjoining districts derived a living principally from two sources: marine related employment and agriculture. A lot of employment for local people was generated by the British naval presence, directly on Haulbowline itself and in servicing the sailing fleets. On Palmers Island adjoining Ringaskiddy (now the ferry terminal site) there was a boast repair company which also operated a fleet of tugs and tender vessels to service shipping entering the harbour including the transatlantic liners. A number of small local boat builders provided opportunities for skilled employment.

Fishing boats operated out of Ringaskiddy and Monkstown and their catches were sold on the piers of Ringaskiddy, Monkstown and Cobh. Shrimps were significant earners for the fishermen and Loughbeg (the inlet between Currabinny Wood, Pfizer Loughbeg and Glaxo SmithKline Beecham) was a most fertile ground. Many families living along the Loughbeg shore made a livelihood from shrimp fishing.

With the departure of the British navy, employment changed and local people obtained work in Irish Steel which set up on Haulbowline Island and later others were employed in ship building in Verholme dockyard.

Side by side with the vicissitudes of marine related employment was the enduring agricultural activity. The land in Ringaskiddy ands surrounding districts comprise some of the most fertile land in the country and were farmed by progressive farmers. The natural fertility coupled with the sea influence produced early ripening of potatoes, vegetable and fruit; often the first of the season for the London market. Dairy farming and cereal growing were important. The farmers were excellent employers and with the mix of crops were able to give steady all year round work as well as abundant seasonal employment which provided a welcome income boost to youngsters and women also.

Amenities and Social Activities

It was not all work of course and over the years the community enjoyed a variety of social activities and sports. Many pastimes were based on the natural amenities freely available in the area. The sea played a dominant role. In summertime swimming was enjoyed in Loc and Gobby which were two very safe and beautiful beaches. Nearer to Shanbally youngsters learned to swim in the pond which is now enclosed by Pfizer's golf course. Boat racing was another favoured pastime and for years Ringaskiddy boasted one of the finest racing crews in the south of Ireland. Regattas were frequently held in Ringaskiddy and survived up to the mid seventies when the last boat races were promoted jointly by the G.A.A. and drama clubs during a series of lower harbour festivals.

The amenities and scenic beauty drew city people to the area and many had summer houses there. With a regular bus service day trippers swelled to local population in summer to the delight of the teahouses, shops and public houses.

Field sports were not neglected also and there was a strong tradition of playing hurling in the area. The then landlord of Ballybricken, a Mr. O'Connor, is credited with organising a hurling match against a side from another estate from Carrigaline in 1828. The club, Shamrocks, that evolved from these early encounters is still thriving and celebrated its official centenary in 1998. Over the years the club produced many senior hurling and Gaelic football teams, winning its first county title in 1904.

The shamrock teams were for many years noted for their hurling artistry -a trait attributed to many of the players being engaged in skilled crafts. As always the farming community were strong supported making fields available for games and other events. The farming community were not found wanting either in 1961 they put up 50% of the funds to enable the club to purchase their grounds at Shanbally.

In the 1950's a soccer club as formed in the area using the Tank field playing pitches of the former British navy grounds. These grounds were later taken over for industrial development (the site of Buckeye) forcing the club to vacate its tradition location. Fortunately new grounds have been purchased in Shanbally. It is now enjoying great success at all age levels. It won the Cork Junior AUL 1st division league in 1993.

A keen interest in basketball also flourished for a brief period but lack of the proper facilities demanded by the modern game militated against development of the sport in the area and made its survival impossible.

Another old club in the locality was the Harrier and Draghunting Club which availed of the natural hunting facilities courtesy of the farming community. This provided a valuable sporting outlet for men and boys especially over the winter months. Regular draghunts were held in Ringaskiddy and brought hunting enthusiasts from all over the county On those days Ringaskiddy would be buzzing with dog owners, supporters and bookmakers gambling on the draghunts.

Drama has a special place in Ringaskiddy. Its origins are with the G.A.A. club who promoted plays and concerts in the wintertime when playing activities ceased. In the 1950's the Shamrock Dram Group was formed and has gone on to achieve national fame for acting at all age levels. Haulbowline also has its own drama group. The performing arts of music, dram, singing and dance are strongly supported in Ringaskiddy. An annual youth festival which draws competitors form all over the county has been running in the local community hall.

Schools
The locality has always had two primary schools one in Shanbally and another at Ringaskiddy. The schools because of their locations were ahead of their time in outdoor activities. Ringaskiddy school classes spent many hours learning to swim in Loc beach and in nature study. Similarly Shanbally school had a facility near Ballybricken for swimming and the adjoining estate was a haven for nature study. The schools in this area have a long and proud tradition but following the departure of people out of the area it was feared that numbers would decline. Happily there has been a recovery in pupil numbers in recent years due in part to new families residing in the area and also due to former residents now living in Carrigaline and elsewhere sending their children back to Shanbally and Ringaskiddy for their primary education. Today the primary schools are urged to involve their pupils in a side range of physical development including both indoor and outdoor sports as well as field activities such as natural history and the environment. Notwithstanding the efforts of dedicated teaching staff it maybe said that with the loss of amenities today's school children are more deprived than ever of recreational facilities based in the area.

Transition
The 1960's saw the beginning of major countrywide industrial and social change in Ireland. Nowhere was this more evident than in the Ringaskiddy area where it started with the breakup of the Ballybricken estate for the Pfizer development and was soon followed by the industrial planning which resulted in the acquisition and development of huge areas of farmland and coastline. The departure of farming families and other householders in the face of advancing industrialisation was, for a small closeknit community, both dramatic and traumatic.

The absence of a social plan to counteract the impacts of industrialisation caused a population hemorrhage form the community on a scale not seen in living memory. This Diaspora was in marked contrast to almost all other villages adjacent to the city which experienced vigorous population growth within the same period.

The departure of almost a complete generation in now very much evident in the demographic imbalances in the Ringaskiddy area which have weakened social cohesion and vigour. Indeed but for the phenomenon of former residents retaining links with the locality it is doubtful if many clubs and organisations could have retied their present viability. This is likely to be a transient effect however as allegiance will ultimately transfer to the new community in the second generation. Thankfully there are positive indications that a reversal in population numbers is underway. This has been achieved by the construction of approximately 70 new private dwellings in the past 2 years. It is vital for community development that this trend in upward population growth be continued.

The Community And Development

Since the early 1970's the Ringaskiddy area has been targeted as in important industrial and commercial port zone. To realise the industrial potential of the area the State, local and port authorities have invested heavily in infrastructural development such as roads, water supply, sewage facilities and a natural gas supply. Major port developments in the form of Deep water quays, warehousing, Ro Ro, passenger ferry facilities and extensive Foreshore reclamation have been carried out by Cork Harbour Commissioners. Large scale industrial development has been undertaken by Pfizer, Glaxo SmithKline Beecham, A.D.M., Moog, Novartis and others. In total the state and commercial investments exceed 1.5 billion pounds in present day costs. All these developments have impacted in the local community and have brought about radical changes within a short two decades.

The transition form a rural and nautical community to an industry dominated community has not come without trauma. The community has seen areas of prime farmland or coastal scenery altered and changed; homes, farm houses and familiar centuries old landmarks have disappeared off the map with the help of bulldozer and dredger. Many areas have been altered out of recognition by factories, roads and jetties. Large tracts of fertile farmland are sterile landbanks held in a form of limbo awaiting an uncertain fate.

Rapid transition form rural farmland to developed land is nothing new; it happens all the time in areas of urban growth. In those situations a balance of industrial and housing development is aimed for. With good planning, in time a new and vibrant community emerges with its owns sense of place and its own sense of identity, blending old and new., Cork city is witness to such orderly industrial and residential growth carried out without the traumas experienced in the Ringaskiddy development. Why developments in Ringaskiddy should be so different is difficult to explain fully but certain contributing factors are obvious.

The type of industry attracted to the area earned itself a bad image particularly through malodorous emissions. As much of this development was based on non-indigenous industries there were inevitable cultural and attitudinal differences which contributed to poor communications between industry and the resident community. To compound matters the resident community was afforded not consultative role a factor of crucial importance in an era of growing environment concern and consciousness.

The focus of development in the Ringaskiddy area was on industrial development exclusively which carried out at a bewildering pace and scale. The authorities in promoting industry appear to have give little or no consideration to the equally important development of the local community. It was as if a community which had existed in the area far back into the distant past was now an undesirable hindrance to industrial progress

There is almost tacit recognition of this situation in the Cork County Development plan section 3.2 states

> "*While both Shanbally and Ringaskiddy villages will eventually be surrounded by industrial development, areas have been reserved for limited residential development. Land immediately adjacent to the residential areas should act as a buffer between the villages and the industrial zones. However, housing development should only accommodate local needs and a development control policy to this effect will be implemented. The council will continue to facilitate local housing needs within the village areas."*

These are unusually strong words for a planning document. One can only wonder if it is the fate therefore of the local community that they be herder into village reservations with little or no scope for development. Surely the county development plan can contain the foresight to recognise that it is not in any sectors interest for one to dominate over the other. And surely a county development plan can give bolder and more positive encouragement to redress the balance somewhat in the community favour. Because if it does not one must ask why?

Has industrial and port development been beneficial?

The developments that have taken place in the Ringaskiddy area are of national importance and have created vital employment and wealth to the wider community. No community can afford to be so introspective as to ignore the greater good and the Ringaskiddy area community is no exception. People from the area have gained limited but nevertheless much needed employment for development either directly in local based industrial plants or through supporting service industries. It is also recognised that local employment is a cornerstone of any community well-being.

But employment, vitally important though it is, is one side of development. A glance at the accompanying illustrations will show dramatic changes that have come about within the last 20 years. We have alluded to beneficial employment creation. Unfortunately reference must also be made to the negative impacts of industrial planning and port development. It is no harm to ponder briefly on some of their effects.

Ringaskiddy and Shanbally Villages
Scant regard has been paid to the proper development of the two villages in the area. Developments have been crude and insensitive. Road severance in particular inhibits the community's enjoyment of village life and severely curtails any form of balanced development of the villages.

Ringaskiddy village has lost its foreshore, its fishing boats, its regatta. Its location now would puzzle an observer unfamiliar with its history. Of port development had been carried out differently it could now be a thriving sailing centre with its houses hugging the seashore. Alas ! the tide has gone out for ever and Ringaskiddy village is meaninglessly all-a-oneside of a busy highway.

Shanbally Sean Baile (its name evoking links with an ancient past) was a typical country village around whose center nestled church, school, shop and public house. It is now riven in tow by a highway for juggernauts; its focal point a traffic roundabout. Why did a modern road have to be built through the century of the village.

The Ringaskiddy Peninsula prior to industrialisation was an area of outstanding scenic beauty. By contrast it is now very much visually degraded by industrial buildings and related development. Emission stacks and exhaust plumes dominate the skyline and there is wide spread concern over air and water quality.

Recreational enjoyment of the area has been circumscribed by industrial and port development. Marine leisure: boating, sailing and regattas once such an integral part of local life have all but disappeared. Gobby and Loc leaches were formerly much frequented by local people. Fears of water quality, unpleasant smells and dense layers of rotting seaweed on the shoreline now spoil their enjoyment.

The local community has borne the brunt of the above impacts, which have created tensions and division and diverted the naturally positive energies of the people. There were signs however that these excesses were in the past. Following the more stringent environmental legislation more committed enforcement by the local authority and a commensurate commitment by local industry there is an evident and welcome improvement in the quality of the local environment. We had hoped to build on these success and confine the past to history. We had at long last turned the corner we thought.

What is a community
Throughout this document "community" is constantly alluded to and it is important that we define its meaning. A community is a people sharing a common place and a common purpose. That definition encompasses not alone residents of an area but equally importantly industry whose workers, even if they do not reside in the area, also live half their waking hours in the community. All share a common place. Do they also share a common purpose.

If the community is to develop and prosper then this common sense of purpose will have to prevail. This shared sense of a common future must relate not only to employment, the environment, industrial and residential planning but permeate every facet of community life. If the ideal of a common goal can be accepted then a community can forge ahead in the confident knowledge that the inevitable difficulties and tensions will be resolved for the common good. Sacrifices for the common good however have to be shared equally by all communities and no one community should be expected to carry all the burden.

Current Evaluation and Future Proposals
While the previous paragraphs gave an insight into the past history of the area and describes the development progress etc. it is now time to consider the current impact of past developments on the community

- Employment: The area gives employment through various industries to approximately 2,500 people directly and probably 12,500 people indirectly through service contracts etc. The employees are drawn from a wide area, some whom commute over 60 miles round trip on a daily basis. The employment benefits are therefore spread over a wide area.

- Odours: These occurrences are thankfully very infrequent and are not a major nuisances factor as before

- Traffic: This is a cause of major concern and impacts highly on the communities welfare. The fact is that large numbers of lorries transporting dangerous waste and chemicals drive through the villages of Shanbally and Ringaskiddy together with huge volumes of cars etc. on a daily basis. The inadequacy of the existing road network has been identified by a consultants report on same was also a factor in a new industry deciding to locate outside of Ireland in lieu of Ringaskiddy. It was also given as a reason by Cork County Council for refusing permission recently to another applicant. The traffic problem has been ongoing for a number of years despite numerous request from the community to construct a new roadway to by pass the villages of Shanbally and Ringaskiddy to deal with the problem The existing road network is therefore unable to deal with the existing traffic volumes and one has to question the lack of planning and foresight that allowed this to occur.

- The recent closure of I.S.P.A.T. (formerly Irish Steel) caused the loss of 300 jobs. Disclosures following the closure revealed that the site was heavily contaminated with dangerous pollutants. This news does not bring comfort to the community because it shows that dangerous emissions are still occurring within the area despite ongoing re-assurances to the contrary from the regulatory bodies.

- Incineration: The existence of **five** incinerators serving the pharmaceutical companies within the area is a cause of ongoing concern. Such a high density within a small area can cause serious health problems in the event of a malfunction or incomplete burning etc.

The Indaver Proposal

INDAVERS proposal to erect two incinerators located on land to the east of Ringaskiddy village can only be described as ludicrous when one considered the past history of sacrifice and commitment give by the local community to the cause of job creation. The site is located adjacent to one of the two remaining swimming areas used by the public and is also infringing on a public right of way used for decades by people assessing the Martello Tower which is a listed building of historical importance.

The proposal to construct two incinerators at this location is justified by INDAVER for the reason that they say that 60% of the hazardous waste is generated in county Cork. They do not indicate what quantity of hazardous waste is already being incinerated by the Ringaskiddy industries in there five incinerators or if the 60% is waste remaining after this other incineration by the pharmaceuticals. Whatever the percentages are is of no concern to the Ringaskiddy community. We are stating quite explicitly that this community has done more than enough for the common good and that it is not going to tolerate any further de-grading of the area. It has taken in excess of 20 years of battling with the various regulatory bodies and industry to obtain a standard of environment that convinced people that the area was an acceptable place to live in again. To allow the INDAVER company to construct incinerators in the area will be the catalyst that will turn the community against existing and future industry and the progress that has been made in this area will have all been in vain. The potential fallout from this scenario could have consequences of a national proportions.

It is imperative that the decision makers in this proposal give very careful consideration to the promises that were made to this community in the past when they were promised that they would never be asked to consider accepting a facility of this nature.

In conclusion if it is deemed necessary that county Cork needs an incinerator to deal with its waste then we as a community insist that a site be found for it is some part of this large county which has not had the misfortune to have had to endure what Ringaskiddy and its environs have been through for the past 30 years.

Furthermore this planning application by INDAVER can not be considered in the light of the current evidence that the existing road network system is proven to be inadequate and the application has therefore to be deemed premature.

Appendix 1

1. Summary of Studies on Occupational Health

2. Summary of Studies on Health of Populations Living in the Vicinity of Incinerators

Appendix 2

Pollution From Incinerators

Biomarkers of Human Health.

Introduction

Traditionally assessment of the dangers of incinerators to human health has been made from levels of the toxic substances present in the effluent gasses and in the levels of toxic metals in the waste ash resulting from the combustion of paper, domestic waste and plastic materials made from a variety of different types of plastic.

It has always been difficult to measure the exposure of a population to specific environmental factors because the analytical techniques available lack the sensitivity to measure the low levels of toxins encountered in the airborne materials and other sources such as food and contamination of drinking water.

It has also been difficult to relate specific levels of exposure to disease states in humans especially since many of the pollutants can be accumulated in the body leading to long term effects and little information is available on the interaction of several pollutants in the human body. It is always assumed that effects are additive.
Humans cannot be used as test objects. Experimental animals are inappropriate models to study these problems.

Experimental Design

To overcome some of these problems, and to get some knowledge on the effects of pollution, a group of medical and scientific experts in Belgium performed a detailed study taking two groups of 17-year-old college students of both sexes who lived near incinerators (suburban group). These subjects would have been exposed to high levels of pollutants from these incinerators. A carefully selected and matched control group of students of both sexes who lived in a rural area removed from an industrial environment (rural group) were selected for detailed investigation.

The students had lived all of their lives in the respective areas.

Students were selected because it was important to investigate the effects of pollutants during the growing phase. Care was taken in defining the baselines for admission to the study and in ensuring that all participants in the study met the requirements as defined in the selection for admission to that study**.** Care was also taken to ensure that the clinical assessment was the same for all students **(Lancet 2001; 357: 1660-1669)**

Two incinerators were selected (23,000 tonne and 100,000 tonne/ year capacity), these operated over the lifetime of the students (approximately 17 years). They were closed later for failure to meet environmental standards. It is therefore expected therefore that these adolescents were subjected to pollutants from the incinerators as they grew and developed.

Results

Concentrations of lead and cadmium in blood, PCBs (polychlorinated biphenyls) and dioxin like compounds in serum samples and metabolites of VOCs (volatile organic compounds) in urine were higher in the students in one or both suburbs than in the control (rural) group.

Students who lived near the waste incinerators matured sexually at an older age than others and testicular volume was smaller in boys from the suburbs than in the control group.

Biomarkers of glomerular or renal tube dysfunction in individuals was positively correlated with blood lead levels.

Biomarkers of DNA damage were positively correlated with urinary metabolites of PAHs (polycyclic aromatic hydrocarbons) and VCOs.

Conclusions

Biomarkers can be shown to detect environmental exposure to pollutants and measure their biological effects before overt disease develops. The findings suggest that current environmental standards are insufficient to avoid measurable biological effects.

Effects Noted.

PCBs and Dioxins (which consist of a mixture of chemical substances) can accumulate in fat tissue and can disrupt the endocrine system (balance of hormones in the body).
PCBs can bind to estrogen receptors and can mimic some of the actions of the body's estrogen in women. Because of their structure they can exert an antiandrogenic effect (i.e. they act against the male hormones – androgens).

By these actions breast development and sexual maturity can be delayed in young women and testicular development can be reduced and delayed in males.

Effects on glomerular filtration shows that changes have occurred which can effect kidney function which in a more developed stage can lead to blood pressure and heart problems for the subjects concerned

Young people are very vulnerable to many noxious agents and their protection is an important public health issue. Environmental biomonitoring should be an important part of any health strategy and should include screening for important cardiovascular risk factors, hypertension, and hypercholesterolaemia and should include health education.

The cost of bio monitoring is expensive and long-term .It needs to be undertaken with a professional organisation with financial commitments for many years. To be done effectively it cannot be tagged on to existing hospital pathology laboratories or public health laboratories because of the specialised nature of the work and equipment required. A small number of the tests could be performed in the pathology laboratories.

Do We Learn From the Past

It was well recognised that in the blood transfusion business that there was a factor which we called " Non A, Non B" which was present in some blood donations and subsequently appeared in patients following infusion of some donated blood.

This factor was recognised as a significant risk by the scientists even though the factor had not been chemically identified and characterised. Pointers were clear that certain characteristics of the donors made them unsuitable to donate blood even before the significance of these pointers were fully realised Later the problem factor was identified and a testing procedure developed but not before a lot of irreversible damage was done to patients and families. Pointers to exert caution were ignored. Such is the nature of progress in medicine and science.

With respect to environmental pollution, the signs are all there without any dispute that the levels of environmental pollution need to be reduced.

We are at the same point in bio monitoring in which factors are beginning to appear as a result of pollution. These are reflected in the endocrine function in adolescents, which could cause irreversible changes to young people and because of the cumulative nature of the pollutants may show long-term changes during adult life. There are alternatives to waste management by using incineration, which do not involve engineering the population towards ill health. Front-end costs of dealing correctly with waste will be a fraction of the total cost of having to correct problems later. There is a commonly used expression in industry and it also applies to many walks of life " We could not afford to do it correctly, but we could afford to do it twice "

Richard F.Palmer Ph.D., C.CHEM MRSC.