Statement of Evidence for Public Inquiry [September 2005] regarding proposed incinerator at Belvedere. Application Reference: GDBC/C/003/0001

by Michael Ryan BSc, C Eng, MICE

Relevant background

The recent ruling by the European Court in favour of Nadezhda Fadeyeva [The Times, 10 June 2005] concerning the failure of the government to move Ms Fadeyeva from her apartment that was dangerously close to Russia's biggest steelworks is relevant to the Belvedere incinerator inquiry as it is the first EU judicial ruling on the duty of a State to protect the health of its citizens from industrial air pollution. This ruling means that the health implications of the Belvedere incinerator inquiry must be open to consideration and determination in the forthcoming inquiry, irrespective of any earlier decision, otherwise the Human Rights of EU citizens in Bexley, and also some surrounding London Boroughs, and parts of both Essex and Kent will be infringed -just as Ms Fadeyeva's "enjoyment of her right for her home and her private life" were found to have been illegally compromised. Even the Russian government admitted there was danger to health from airborne pollution carried from industrial plants where it was unsafe to live - unlike the UK where legitimate evidence regarding health damage are brushed aside, nowhere more so than at public inquiries such as the January 2004 Shropshire Waste Plan public inquiry where I was an objector [on health grounds], Dr Dick van Steenis was my expert witness and the Inspector was same Mr Derek Smith who is to be Inspector for the second Belvedere incinerator. There was no mention of health in Mr Smith's report on the Shropshire Waste Plan inquiry, nor was there any mention of Dr Dick van Steenis or myself - despite extensive prior written evidence and also detailed oral evidence during the two-hour session at the Shirehall on 15 January 2004.

Report

1. I was awarded the degree of Bachelor of Science in Civil Engineering in 1972 and elected Corporate Member of the Institution of Civil Engineers in December 1976. My professional life has provided ample opportunity to examine statistical and other data in order to draw accurate conclusions. That experience is relevant to the research and analysis carried out in recent years. I also prepared "Risk Assessments" for possible health and safety effects resulting from construction and other works after such documents became a legal obligation following the Management of Health and Safety at Work Regulations 1992.

2. The Environment Agency [EA], which was found guilty in Lincoln Crown Court [December 2004] for negligently causing the death of an employee, also fails to instruct employees how to protect the health of the general public whose taxes pay the salaries of EA employees and also those of the DEFRA civil servants who are supposed to monitor the EA and the Health Protection Agency and Primary Care Trust public health doctors who are supposed to protect the public, but instead hide the truth and tell lies and spin as occurred with respect to the Colnbrook incinerator proposal in September 2003 and thereafter. [Personal communication with doctor present at discussion with Slough PCT, Hillingdon PCT, Health Protection Agency, concerned Slough GP and an expert toxicologist. The September 2003 meeting was to discuss the health implications of the proposed incinerators at Colnbrook, which were subsequently passed as allegedly being of no risk to health - despite overwhelming evidence to the contrary, further confirmed with birth defect data in this report.]

3. The EA's own internal report report fails to instruct employees on the actual harmful particle size [PM2.5] or on the toxicology of various heavy metals, PAHs and radioactivity such that employees are unable to protect the public from deadly emissions from incinerators - both airborne and from toxic ash disposal- and other industrial processes. The following group discussion of Environment Agency employees and other "experts" regarding their conclusions about the health impact of a new incinerator, [which might possibly have been the proposed new incinerator at Belvedere - or just a fictional one] proves what I have just written:

"The group was confident that (based on the modelling) PM10 and SO2 emissions from the incinerator will not constitute a health problem to the local population. The issue of health contaminants remained unresolved as no dispersion modelling had been undertaken on these. **The group considered that the greatest challenges relate to data interpretaion and overcoming community resistance to such a project.** Much of the discussion focussed on how to obtain a representative sample size that would allow for detection changes in the health of the local population." ["Epidemiology Workshop on Human Health Tools and Techniques", CLARINET, page 23]

The same report [also page 23] does consider the following of potential use:
"Use of GP records/hospital admissions and discharges records and mortality rates. Collect relevant emission data from the operator. Use these in air dispersion modelling and determine ground level concentrations. Look at trends and possible correlations between increased air concentrations and hospital admission rates or mortality rates." [Note that there are no factory-set, accurate PM2.5 monitors in use in the UK, therefore the proposed action suggested by EA "experts" is unattainable]

If anyone at the EA had examined infant mortality rates for 2002, they would have found the majority of locations with high rates of inifant mortality listsed in Key Population & Vital Statistics, by ONS were where there are incinerators, some of which were among the 34 incinerators that were authorised to burn radioactive waste by the EA. A list of locations with infant mortality rates equal to or greater than 8.0 per 1,000 live births in 2002 is included as part of this submission. [Appendix 1]

Average infant mortality rates for a large area often hide wide variations if data is examined by electoral ward as I have done for each of the 140-odd electoral wards in Shropshire [including Telford & Wrekin Unitary Authority]. The EA's report quoted above failed to state what procedure was to be followed to prevent further excess illness and premature death once these had been identified. This failure is at the heart of the problem as health professionals rely on the EA to monitor for health [yet the EA admit that they have no knowledge of health and are also untrained in toxicology] and the EA apparently wait for some public health doctor to inform them about excess premature deaths and illness [which public health doctors hide by fraud]. In this way nothing gets resolved as illustrated in Shropshire as follows.

"Malinslee & Langley" is the electoral ward in Telford and Wrekin Unitary Authority with the highest infant mortality rate according to ONS data for 1998-2003, excluding low birth rate rural wards. The latest infant death reported in the Shropshire Star [17 August 2005] was of a three-month-old child: "Baby boy dies day after vaccinations" who had also lived in Malinslee & Langley ward and will be an additional statistic for the 2005 ONS mortality data by electoral ward - having lived and died in one of the high asthma zones shown on the map at www.ukhr.org/asthma.

4. The failure of the Environment Agency [EA] to regulate toxic emissions of PM2.5s is illustrated by the fact that the recorded rate of heart and circulatory defects in babies born in England and Wales has more than tripled from the minimun recorded rate of 7.0 per 10,000 total recorded births in 1995 to 21.2 per 10,000 in 2003 according to ONS data. A graph showing rates of this defect from 1971 to 2003 is at www.ukhr.org and attached as Appendix 2.

5. The EA's wild allegations and inaccurate modelling were revealed at the Castle Cement [Mold] public inquiry where it was alleged that the emissions would spread over a radius of: 500 metres [ENTEC, used by EA]; 5 km [Public Health]; and 500Km [Government Committee]. An honest statement of high health impact grounding [ie the area within which the emissions do maximum damage] would have been 45 Km.

The stack height of the proposed Belvedere incinerator is to be 90 metres [Personal communication, Phil Williams, Environmental Health department, Bexley Council], therefore all those living within a 21 mile radius will be adversely affected, with wind direction determining the degree of exposure.

6. Since 2002, I have received tuition in toxicology from Dr Dick van Steenis and attended public lectures given by him in different parts of the UK. I've also carried out health research in Shropshire, some of which is at www.ukhr.org/asthma

7. Dr van Steenis and I have found that high childhood asthma zones in Shropshire coincide with electoral wards with high rates of infant mortality, premature deaths from cancers and heart attack, stillbirth, COPD, diabetes, and depression/suicide. Some of the this data is in published medical reports and some obtained by Dr Dick van Steenis or myself under the Freedom of Information Act. The pattern of illness and premature deaths in eastern Shropshire shows the variation in exposure to industrial PM2.5 emissions from two known pollution sources, namely a power station and a brickworks. The prevailing winds have determined the degree of exposure to industrial PM2.5s

8. Keith Smith, the Inspector for the proposed Belvedere incinerator, might recall Dr van Steenis and myself from the Shropshire Waste Plan Public Inquiry he chaired in January 2004, when I claimed that both the proposed and the existing disposal of waste had not considered any health effects at all. Mr Smith asked the Shropshire County Council officer where radioactive and clinical waste had been disposed of since the Shrewsbury Hospital incinerator was closed in August 1995 and the officer was unable to provide an answer. I now hold mortality data for all ages for each of the 140-odd electoral wards in Shropshire providing irrefutable proof that my allegation, which was ignored together with all health matters in Mr Smith's decision document, was true. Neither Dr van Steenis nor myself were referred to in Mr Smith's report and neither was health. During the January 2004 public meeting, Mr Smith claimed to be a Government puppet. If that is still the case, this current Belvedere inquiry is a further waste of time, money and lives. The only difference is that following the Fadeyeva ruling by the European Court, Mr Smith's role as Government puppet might leave him as an accountable, and easily identifiable, Government fall-guy.

9. Paragraphs 3 and 7 above are relevant to Bexley as variations in rates of illness and premature deaths downwind of industrial PM2.5 sources in London and the surrounding areas of Essex and Kent will indicate the probable sources of such adverse health effects. Dr John Snow was the first to use mapping of health data in the London cholera epidemics in the 1850s and Dr Dick van Steenis used the same technique with a childhood asthma survey in West Wales [The Lancet, 8

April 1995] which he followed up with cancer and depression data proving that the high asthma zones had a cancer rate that was twenty times higher than the low asthma zones and a hospital admission rate for clinical depression that was nine times higher than the low asthma zones [Case Study 1, American Academy of Environmental Medicine Conference, 3 November 2002]. Dr Jeremy Queenborough, Consultant in Public Health at Dyfed Health Authority denied any adverse health effects of emissions from the oil refinery/power station complex at Milford Haven waterway and also refused to divulge hospital admission data for heart attack. Dr Jeremy Queenborough died of a heart attack aged 52 in 2000. The late Robin Cook MP, whose Livingston constituency is downwind of Grangemouth oil refinery, met a similar premature death to Dr Queenborough. Unlike Dr Queenborough, Robin Cook [aged 59] was probably unaware of the health risks of breathing toxic heavy metal and other PM2.5 emissions from oil refineries or industrial processes such as incinerators.

10. In order to provide conclusive proof of the adverse health effects of the proposed new incinerator it is necessary to prove adverse health effects of existing incinerators. The only long-term health study of a municipal incinerator is of Sint Niklaas ["Mispelstraat: Living under the smoke of a waste incinerator" at www.milieugezondheid.be] which includes a list of illnesses recorded in a single street [page 7] and also refers to birth defects [and other health effects] on page 21. The Sint Niklaas study included GP and hospital records etc.

11. Birth defects in Bexley

11.1 Birth defect rates are an accurate and effective indicator of exposure to mutagens such as radioactivity, organophosphate pesticides/herbicides and industrial emissions of PM2.5s.

11.2 Birth defects were proved to be caused by industrial PM2.5s from a steelworks by McMaster University, Canada [Science, 14 May 2004]. Causation by PM2.5s was proved by use of HEPA filters to remove PM2.5s, leading to a reduction in birth defect rates of mice breathing filtered air compared with those breathing unfiltered air.

11.3 Birth defect data has been collected in the UK since January 1964 "as a means of providing early information of causal factors of congenital malformation" ["Scheme to notify malformations", The Times, 6 January 1964] and yet no use of this vast archive of data has been used to reduce the incidence of birth defects or to prevent the installation of new industrial processes [such as the proposed Belvedere incinerator] that will increase rates of babies born with defects and also the numbers of pregnancies terminated due to known or suspected defects.

11.4 The earliest Bexley birth defect data I've seen is for 1987, when 36 of the 3,088 babies born in that year [live and stillbirths] were notified as having defects. The rate of babies born with defects in that year was 11.7 per 1,000, ie 1 in 86 births. Scanning techniques improved greatly during the late 1990s, so defects were more readily identified during pregnancy leading to increased rates of terminations.

11.5 Emissions from three incinerators already affect Bexley residents, two of which [SELCHP and Crossness sewage sludge incinerator] were operational from around 1992/3 and could not have contributed to the 1987 birth defects statistics. The White Rose incinerator at Sidcup, which is

authorised by the Environment Agency to burn radioactive waste, might have been operational in 1987.

11.6 Comparison of the widely different birth defect rates in Bexley, Bromley, Greenwich and Islington during the years 1995-2002 show that exposure to industrial PM2.5s are the most likely cause. Islington has been chosen as a "control" for all locations in the UK as it is in the middle of the largest urbanm area, thereby removing any traffic effects from the data. Bexley had the highest recorded rate of birth defects in London for each of the years 1998 to 2002 inclusive.

Primary Care Trust	**Rate of babies born with defects per 1,000 total births**								
	1987	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Bexley	11.7	8.5	11.7	12.0	**20.2**	**17.3**	**24.6**	**24.6**	**23.3**
Bromley	19.7	9.0	5.6	7.6	7.1	6.1	7.6	6.1	6.7
Greenwich	16.1	7.5	4.1	5.8	8.8	10.7	9.8	1.2*	1.2*
Hillingdon	16.7	11.2	10.1	13.8	7.9	11.0	17.4	19.0	10.6
Hounslow	19.4	5.8	9.0	7.2	9.7	9.8	10.9	20.0	22.3
Islington	9.5	1.5*	1.6*	3.9	1.9	1.5*	4.4	1.6*	1.6*
Slough		8.6	6.4	10.3	11.7	15.5	16.3	14.9	14.9
England average	20.1	8.6	8.7	8.9	8.6	11.0	12.1	11.5	11.1

Table 1

A graph showing the 1995-2002 trend of birth defect rates in Bexley, Islington and England is attached as Appendix 3. Note that Islington's rate shown on the graph was assumed to be the highest possible in the years marked with an asterisk, i.e. 4 babies recorded as born with defects.

Bexley's birth defect rate has risen from just over half the England average rate in 1987 to more that double the average rate for England in 2002. Islington's birth defect rate was just under half the England rate in 1987, yet has fallen to less than 14% of the England rate by 2002. The asterisks indicate locations where the number of recorded defects was "less than 5" and the rates shown are based on 4 such babies being born with defects in each location. If just one baby had been born with a defect in Islington in 2002, the rate would have been 0.4 per 1,000, or 1 in every 2,526 births, comopared with Bexley's 2002 rate of 23.3 per 1,000, or 1 in every 43 births.

Hillingdon and Hounslow are London Boroughs downwind of Grundon's radioactive waste-burning incinerarator at Colnbrook. Hillingdon had the lowest rate of birth defects in London during 1990 [according to ONS published data], the year that Grundon's incinerator was built. By 2000 and 2001, Hillingdon had the highest rate of birth defects in London according to Office of National Statistics published data. The data in the above table is unpublished ONS data that has been released to me on Ministerial instruction, along with birth defect data for each of the 303 Primary Care Trusts in England, 31 of which are within the Greater London Authority.

Greenwich is included in the above table to illustrate an additional heath effect of disturbing heavy metal PM2.5s when the Millenium Dome excavations were carried out. Dr Dick van Steenis had access to results from asthma surveys in South London before and after the Dome excavations which showed that the childhood asthma rate rose from 11.9% to 50%. The elevated rates of birth defects in the above table show that asthma wasn't the only adverse health effect and the adult cancer rate in affected parts of Greenwich will soar after 2012 due to the same PM2.5 exposure.

The London Borough of Bromley is adjacent to Bexley, but is almost always upwind of it with prevailing westerly winds, therefore Bromley residents are relatively free from the toxic PM2.5 emissions from the three named incinerators - leading to birth defect rates that are about a third of those in Bexley.

Slough is included in Table 1 above as Grundon's radioacvtive waste-burning incinerator at Colnbrook is close to the boundary between Hillingdon and Berkshire. The most common wind direction is westsouthwest, which means that toxic PM2.5 emissions will be breathed by residents in Hillingdon, Ealing and Harrow. The second most common wind direction is northwesterly, which mens that residents in Hillingdon, Hounslow and Kingston receive the deadly PM2.5s.

John McDonnell MP was concerned about high rates of birth defects in Hillingdon and Len Cook, Chief Statistician, released Hillingdon birth defect statistics that were significantly higher than those published by ONS for the years 1994 and 2000 [Hansard, 29 March 2004, Col 1127 W]. I have sent birth defect data to many Members of Parliament and other politicians, including John Austin MP, whose constituency office I telephoned on 30 June 2004 about the birth defect issue and to whom I faxed a letter and data the same day. My letter to John Austin MP of 30 June 2004 is attached as Appendix 4]

Conclusion

The increased rates of birth defects shown in Table 1 of locations downwind of incinerator sites, compared with the low rate in Islington proves an association between incinerator emissions and adverse health.

If the proposed new incinerator is built, the adverse health effects will be experienced over a much wider area. Toxic PM2.5 emissions from existing incinerators are known to cause birth defects, a wide range of serious illnesses and premature deaths of all ages groups. If the proposed incinerator application is passed, the results will be indiscriminate manslaughter. Hitler's "final solution" was targeted at minorities. To knowingly pass an industrial process that will cause many thousands of needless deaths is an unforgiveable crime which need not be committed.

Mr Smith might recall that no incinerator applications have been turned down at public inquiry, or otherwise, on “health grounds” and yet three such refusals are worthy of note.

1. Hull incinerator, at which Dr Dick van Steenis was expert witness and Dr Autilia Newton was the public health doctor who was unwilling to attend the inquiry to be cross-examined by Dr van Steenis. She was as far away as possible for the inquiry, being in New Zealand.

2. Kidderminster incinerator, in the constituency of an indepedent MP who is also a doctor. Professor Harrison, a government “expert” on health effects of airborne pollution, despite having no medical qualifications, lives at nearby Stourport and might not have wished to live so close to an industrial process deemed “safe” elsewhere.

3. Aberdeen incinerator was recently turned down and Professor Anthony Seaton, whose January 1995 Lancet report about industrial PM2.5 air pollution coincided with Dr van Steenis’ West Wales asthma survey, is a Professor at Aberdeen University and might also be unwilling to breathe toxic PM2.5s.

Appendices

1. Graph of heart circulatory defects, England & Wales, 1971-2003, based on ONS data

2. UK locations where infant mortality rates were 8.0 per 1,000 live births or above during 2002, according to ONS data

3. Graph showing recorded rates of birth defects in Bexley, Islington and England during years 1995 to 2002 based on ONS data

4. Letter to John Austin MP from myself dated 30 June 2004 headed: “Rising rates of birth defects in England & Wales”

cc Ken Livingstone
Col B Turner
Dr Dick van Steenis
Mr J Ryan
John Austin MP

Infant mortality rates, 2002, from Table 4.1b: "Key Population and Vital Statistics" by ONS

Location	Infant deaths	Infant mortality rate	
United Kingdom	3,497	5.2	
England & Wales	3,127	5.2	
Wales	137	4.5	
West Dorset	9	11.3	Two-headed tortoise, Dorchester
Brent	46	11.1	*
Stoke-on-Trent UA	31	10.8	*
Boston	6	10.6	
Strabane	5 [Northern Ireland]	10.5	
Nottingham UA	34	10.2	*
Congleton [Cheshire]	8	10.1	
Lincoln	10	10.0	
Penwith [Cornwall]	6	10.0	
Birmingham	143	9.8	*
South Derbyshire	9	9.7	
Newport [Wales]	16	9.7	
Lichfield	8	9.5	
Wear Valley	6	9.3	
Hackney	38	9.3	*
Crewe & Nantwich	11	9.2	
Bradford	67	9.2	*
Kirklees	45	9.0	*
Manchester	51	9.0	*
Canterbury	12	9.0	
Sheffield	49	8.9	*
Coventry	31	8.6	*
Stevenage	9	8.6	
Ashfield [Nottinghamshire]	11	8.6	
West Dunbartonshire	8	8.5	
Rochdale	26	8.5	*
Malvern Hills	5	8.4	
Pendle [Lancashire]	13	8.3	[Castle Cement, Clitheroe]
Middlesbrough UA	14	8.3	*
Erewash [Derbyshire]	10	8.3	
Sandwell	31	8.2	*
Tamworth	7	8.2	
Stafford	9	8.2	*
Newtownabbey [Northern Ireland]	8	8.1	
Gosport	7	8.0	*
Broxtowe [Nottinghamshire]	8	8.0	

Note: Not all locations reveal infant mortality data. Above list shows all at rate of 8.0 and above.

Note that Blaenau Gwent, Carmarthenshire, Ceredigion, Denbighshire, Merthyr Tydfil, Monmouthshire, Powys and Wrexham infant mortality data missing from table 4.1b. The rate of infant mortality in Denbighshire in 1999 was 11.9 per 1,000 live births, a massive increase from 3 per 1,000 in 1998 ["Call for answers on baby deaths", by Gareth Hughes, Daily Post, 18 Jan 2002, p3]

Prepared by Michael Ryan, 16 October 2004. * denotes incinerator close by. Last updated 20 November 2004 for two-headed tortoise, which hatched at Dorchester, October 2004 [Winfrith?]

Fax to John Austin MP, 020 7219 2706 Sheet 1 of
From Michael Ryan

John Austin MP
House of Commons
London,
SW1A 0AA

Shrewsbury,

30 June 2004

Dear Mr Austin,

Rising rates of birth defects in England & Wales

I telephoned your constituency office this afternoon and was advised to send a fax about the above issue to your Westminster office. I lived in Erith from 1953 until 1972 and was horrified to see that Bexley & Greenwich had the highest rate of recorded birth defects in London in 1998 and 1999, and might have had the highest rate in 2001 if those two Boroughs had not been combined with Bromley. I've copied the 1996-2001 London summary chart together with a graph showing the rising rates in Bexley & Greenwich compared with other Boroughs.

Birth defects are caused by "DNA disrupters" such as radioactivity, organophosphate pesticides and toxic PM2.5 particles, ie particles of 2.5 microns or less that are small enough to get into the lungs. You can see a press release of mine about birth defects at www.countrydoctor.co.uk and also "Industrial Air Pollution and the Country Doctor, by Dr Dick van Steenis MBBS, who kindly accompanied me to the House of Commons on 9 March 2004 to explain to John McDonnell MP why Hillingdon had the highest rate of birth defects in London in 2000 and 2001.

I've also copied a graph of heart and circulatory defects in England and Wales from 1971 to 2002 based on ONS data. The important features of this graph are the drop in rates from the 1983 peak of 15.7 defects per 10,000 recorded births [ie live and stillbirths] to the minimum rate of 7.0 in 1995 followed by the dramatic rise to 19.7 per 10,000 in 2002, the latest data that was only recently released, despite having been scheduled for publication on October 2003. The 2002 data only shows 33 locations in England and Wales, despite one hundred locations being listed in 2001 and 201 in 1987, the star of the data that is detailed by location. You can access the 1999-2002 data online from ONS. I've also copied Table A from the 1997 data and draw your attention to the rates of "cardiovascular anomalies" for the 11 years ending in 1997. I've copied the North Devon Journal article of 20 May 2004, and also page 21 of the Belgian incinerator report.

The birth defect data collection started at the instigation of the Chief Medical Officer at the time of the Thalidomide scandal and was intended to spot trends and identify environmental causes. Since "alternative" fuels were first allowed to be burnt in 1992, the emissions of toxic PM2.5ws has soared, hence a range of adverse health effects of which asthma and birth defects are among the first to be noted. Bexley & Greenwich is affected by incinerators at SELCHP, Crossness and White Rose, Sidcup; the latter being authorised to burn radioactive waste, just like Grundons at Slough [Colnbrook]. I've copied Barbara Young's letter of 23.12.02 plus list of 34 radioactive incinerators.

Please contact me of you require any further information. Dr Dick van Steenis is at .

Yours sincerely,

Michael Ryan BSc, C Eng, MICE

PS Camden & Islington send their rubbish to be incinerated at Edmonton, hence the low rates of birth defects in Camden & Islington despite being in middle of large urban area.