

The Ecologist Digest

Nuclear Power: Bombs, Accidents, and the Arms Race

\$37m settlement over Three Mile Island, Christopher Thomas, *The Times*, January 26th 1983.

An out-of-court settlement of \$37m (£24m) has been agreed against the manufacturer of the Three Mile Island nuclear plant. The utility estimated direct damage to the plant at \$1,000m and said it had spent \$300m in the cleanup operation. Another \$3,000m had been lost because it had not been able to use two of the Three Mile Island plants to generate power. The utility sought to establish that the manufacturer was negligent in not providing vital safety information. The manufacturer counter-claimed that the accident was caused because the plant was improperly operated. The utility is still pursuing a \$4,000m suit against the Nuclear Regulatory Commission, which it claims was guilty of not warning of safety hazards.

Detailed reappraisal of nuclear test 'victims' considered Anthony Tucker, *The Guardian*, January 12th 1983.

The National Radiological Protection Board is to "consider carefully" whether it would be desirable to carry out a full survey of servicemen who took part in British nuclear testing between 1952 and 1958. This follows growing expressions of concern over suggestions that there has been an abnormally high incidence of disease and early death among such ex-servicemen. The NRPB confirmed that it had acted as adviser for the Ministry of Defence in "some cases of servicemen involved in nuclear tests." The deputy director, Mr Fred Morley, said he thought that in these cases a total exposure figure had been given by the MoD, but there had been no detailed dosimetry (measurement of radiation dose). "We have not really examined the question of whether it would be worth while to carry out a full survey of those involved. This is something we will consider carefully over the next few days." An "anecdotal" survey, based on reports of families or individuals concerned, has indicated on the basis of first examination of over 100 reported cases—an incidence of leukaemia and related diseases that is five times the normal level. It also points to apparently large clusters of servicemen who later developed cataracts (normally a condition of old age) or

suffered "recurrent skin eruptions or persistent sores" which imply the existence of embedded radioactive material. Findings of the informal survey contrast sharply with the official assessment from the Ministry of Defence. In a statement yesterday, the ministry said that they were not aware of any evidence implying radiation-linked diseases among those who took part. The ministry could not say how radiation dose measurement was carried out on these individuals or whether tissue incorporated—that is inhaled, ingested or embedded—radioactive materials were involved. No compensation has been paid and in the MoD's view, "carrying out a full epidemiological survey would be a very large and costly task and would be nugatory." No survey of any kind has been undertaken.

A-test man faked Fall-out Figures, Joan Smith, *The Sunday Times*, January 30th 1983.

An official who was supposed to monitor the radiation that servicemen and civilians were exposed to after British nuclear tests has admitted that he faked the readings. The tests took place at Maralinga in southern Australia in the late Fifties. They were monitored by health teams who issued radiation meters to individuals who were working in the blast areas. Doug Rickard, a 43-year-old Australian who worked for the Department of Supply, claimed when visited by journalist Chris Davies that the instruments, called dosimeters, that were issued to hundreds of people did not work because the batteries which were supposed to charge up their power supplies were flat. "We faked the results", he said, "I shudder now when I think about what went on. We were all so naive." Rickard says he simply estimated the amount of radiation an individual had been exposed to and recorded what he thought was an appropriate figure. Rickard's claim has been attacked by the Ministry of Defence in London.

Third former Sizewell man dies of leukaemia, *The Times*, February 17th 1983.

A third former worker at the Sizewell nuclear power station in Suffolk has died from Leukaemia. Mr Tony Adams, aged 57, of Sylvester Road, Leiston, Suffolk, had been a storekeeper at Sizewell for 18 years before taking early retirement last summer. Four former Sizewell workers are known to have contracted leukaemia and three have died. The latest death is to be investigated by Dr Alice Stewart, an authority on the effects of low-level radiation, and the Transport and General Workers' Union for which

Mr Adams was branch secretary at Sizewell. Dr Michael Bush, East Suffolk's community physician, is already investigating the high incidence of leukaemia among former Sizewell workers. But the Central Electricity Generating Board, which is conducting its own inquiry, has written to workers at the power stations telling them that they have nothing to fear.

Reactor fire may have caused 13 Deaths, *The Guardian*, February 18th 1983.

Britain's worst-ever nuclear accident—the 1957 Windscale fire—may have caused up to 260 cases of thyroid cancer, 13 of them fatal, according to a study from the National Radiological Protection Board. Another seven people may have died from other cancers or suffered hereditary effects. The board has now calculated that the total radiation dose to the thyroid glands of the UK population was about half the annual dose from natural background radiation. As a result, up to 260 people would have developed thyroid cancer, and 13 people would have died of it. That compares with 360 thyroid cancers—18 of them fatal—annually from natural radiation. The report said the most exposed group were young children drinking milk produced in the northern countries, which became contaminated with radioactive iodine.

Windscale report angers nuclear industry, *New Scientist*, February 24th 1983.

The publication last week of the National Radiological Protection Board's assessment that some 260 people may have contracted cancer of the thyroid as a result of a fire at the Windscale plutonium pile in 1957 has been greeted with anger by the British nuclear industry. The report undermines the industry's often-repeated assertion that nobody has been killed by the British nuclear programme. At the time of the fire, British Nuclear Fuels Ltd, which runs Windscale, used its own estimates of the doses of iodine-131, the most dangerous radio-isotope released during the fire, on individuals to claim that nobody was at risk. The NRPB, however, has now attacked the problem from the other end, by assessing the radiation dose on the British population and extrapolating from that 260 cases of thyroid cancer and 13 deaths were likely. The BNFL method assumes some kind of "safe" level; the NRPB's does not. BNFL dismissed NRPB's approach as "theoretical." At the time of the fire, government health officials poured the milk from cows grazing across 500 sq.km of Cumbrian farmland into the sea. This was said to be "erring widely on the cautious side." In fact, the NRPB concludes, the ban on milk distribution only cut the total collective dose of iodine-131 to the population by 12 per cent. The NRPB now intends to begin an epidemiological investigation across Britain to see if it can spot any increase in the incidence of thyroid

cancer in areas under the flight path of the radiation cloud that spread south-east from Windscale 25 years ago.

Windscale dumping 'kills 30' Geoffrey Lean, *The Observer*, February 20th 1983.

Thirty people at least have been killed, or doomed to die, by continuing pollution from the Windscale nuclear complex, according to a scientific study. These casualties are in addition to the 13 deaths which the National Radiological Protection Board estimates have been caused by an accident at the plant in 1957. They are likely to arouse even more concern, since they show that regular pollution from the plant, long thought to be safe, is killing more people. The victims have contracted cancer by eating fish contaminated by radioactive waste discharged to the sea. The calculations show that more people all over the country will die if the discharges continue. The casualty figures have been compiled by Mr Peter Taylor, of the Oxford-based Political Ecology Research Group, who has won the respect of scientists at the National Radiological Protection Board, Britain's official radiation watchdogs. Eighteen months ago he was the first to calculate that people had died as a result of the Windscale accident, and a recent NRPB report has borne out his claims. The figures on the effects of regular sea pollution are based on further research into the plant and have been broadly accepted by the Board's scientists. Both sets of figures come from calculations rather than from counting actual cases. This is because it is impossible to find particular cases of cancer caused by particular pollutants. Using one set of estimates, Mr Taylor calculates that 30 people have either died or are doomed to die of cancer caused by eating contaminated fish since discharges from Windscale started. The same number have got, or will get, the disease but will survive. If the discharges continue at recent levels, six more people will get cancer, three fatally, every year. Mr Taylor believes these estimates probably understate the danger by at least three times, and that this will soon be agreed internationally. If this is so, the number of victims will be 90, not 30. Using an alternative set of internationally recognised estimates produces another range of figures. These suggest that the death toll could be as high as 150. These deaths are spread among fish-eaters all over the country, though people who eat a great deal of fish from the Irish Sea—now the most radioactive in the world—are particularly at risk.

Plutonium 'not for weapons' Pearce Wright *The Times*, January 15th 1983.

An assurance has been given that none of the plutonium produced from the operation of nuclear power stations owned by the Central Electricity Generating Board had, or would be, applied to weapons used in Britain or elsewhere. It was made by Mr John Baker, the member of the board with

responsibility for strategic planning and development of the CEEB's administration. Controversy over plutonium and weapons proliferation erupted last year over proposals being considered by the CEEB to supply plutonium to the United States. It was to be used for commercial purposes in America, but would enable the United States to divert its own industrial plutonium to the military field, where there is a shortage. Mr Baker said that plutonium produced in the board's reactors was covered by the safeguards entered into. Nuclear power stations in Britain, and their operating records, were subject to inspection by both the International Atomic Energy Agency and Euratom, to verify that there was no diversion to weapons use. Any civil plutonium would be subject to similar safeguards.

Arms dealer 'offered plutonium to US agent', *The Guardian*, February 4th 1982.

An international arms dealer who worked under cover for the US Government told a court in Dallas, Texas that a British citizen, Ian Smalley, was ready to sell weapons-grade plutonium to the highest bidder. Smalley, aged 42, an international weapons salesman, is on trial in the Federal Court charged with conspiring to ship 100 tanks to Iran and 8,300 anti-tank missiles to Iraq while the two countries were at war. A Government witness, Gary Howard, said that Smalley told him that he knew of a cache of plutonium U-235—the material capable of making nuclear weapons—which he could sell to the highest bidder. He said it was held by Portuguese mercenaries who wanted \$70-90 million for it.

Vote to ban dumping of atom waste, Pearce Wright, *The Times*, February 18th 1983.

In a surprise move representatives reviewing an international treaty covering disposal of hazardous waste voted for a halt to the dumping of nuclear materials at sea. The vote, 19 in favour and six against, with six abstentions, was taken at a meeting of the London Dumping Convention. It calls for a two-year moratorium until a scientific report is referred back with an assessment of the impact of discarding waste at sea. The moratorium was proposed by Spain as a modification to a resolution for total unconditional ban from some of the Pacific Island states. The moratorium was supported by Iceland, Finland, Norway and Denmark. The British led the opposition. The British delegation tried to avert a division with an offer that the UK would stop dumping if it could be shown to be harmful to the environment.

Fast breeder's opponents close for the kill, *New Scientist*, December 16th 1982.

Enemies of the American fast breeder reactor are having a field day this week with the release of a new batch of estimates of the cost of the proposed demonstration plant to be built at Clinch River, Tennessee, between now and 1989. The govern-

ment's auditors, known as the General Accounting Office (GAO), say that the real cost of the project will be \$8500 million—more than double the Department of Energy's estimate of \$3600 million and more than ten times the estimate made when the project was first mooted in 1970. So far Clinch River has consumed \$1300 million of government funds. It will need another \$252 million in the coming year. The costs are vast and there is no guarantee that the electricity it produces will be economic. The auditors have slammed the government's estimates. They say that the government has assumed that the first \$18 million load of fuel is all the breeder will ever need. And it has ignored the cost of reprocessing the fuel to recycle plutonium. Legal costs and the inevitable bill for changes to the plant's design during construction have been underestimated, says the GAO. And, most important of all, the cost of borrowing the money for Clinch River from the public has been left out. The government says this is not relevant; the GAO says it is, and that the bill is \$3900 million.

The GAO calculates that, over its 30-year operating life, Clinch River will cost taxpayers another \$1100 million.

Sizewell

Doubts cast on CEEB's 'weak' economic argument, Penny Chorlton *The Guardian*, January 14th 1983.

A leading economist says that the CEEB's economic case for building a PWR at Sizewell is not proven because, among other dubious calculations it overestimates the rises in oil prices. Gordon Mackerron, fellow of the Science Policy Research Unit at Sussex University and an adviser into the Monopolies Commission inquiry into the CEEB says that, at best, the economic case is marginal. "The argument that Sizewell will make electricity cheaper than it would otherwise be, is probably a lot weaker than the board claims." According to Mr Mackerron, Sizewell is worth having if the board can save half a million tonnes of oil a year. But he adds, this is impossible to demonstrate. "Despite the expectation that electricity demand grows hardly at all the CEEB expects to burn more oil in 2000 than it did in 1981. This is surprising, and in turn, suggests oil savings attributed to Sizewell may be high." Given the financial and other risks involved, he concludes that there is little to be lost in delaying the project at least for three or four years—a period in which the board has conceded that there is no need for nuclear expansion.

Coal prices 'stress need for nuclear power' Penny Chorlton *The Guardian*, January 27th 1983.

Mr Peter Hughes, manager of the Central Electricity

Generating Board's fossil fuel and energy section, told the Sizewell inquiry that Government grants and subsidies to the coal industry could reach £1,000 million in present-day values by the end of this decade. He said the cost of producing coal would increase at a faster rate than expected inflation levels, and as more than 70 per cent of the board's electricity was dependent on coal production, there was a pressing need for nuclear power. His submission is considered by the CEBG to be one of the most important items of all the evidence they are submitting in support of their application to build Britain's first nuclear pressurised water reactor at Sizewell. Mr Hughes told the inquiry that most of the remaining coal pits were old, and would soon become more expensive to work. A close study of the National Coal Board's finances showed that it would face increasing financial stringency over the next 10 years, especially if it adhered to its understanding with the CEBG to maintain price increases in line with inflation, in return for guaranteed demand for 75 million tonnes of coal a year to provide the nation's electricity. However, the gloomy picture could change by the year 2000, when new pits came into operation. Current coal prices would probably rise by 10 per cent if the Government were to lift its subsidies, which were artificially holding the market price down, he said.

Link with leukaemia deaths 'a mystery to CEBG', Roger Milne and Penny Chorlton, *The Guardian*, February 25th 1983.

Dr John Bonnell, the Central Electricity Generating Board's chief medical adviser, told the Sizewell Inquiry that he was at a loss to explain why three out of five leukaemia deaths involving CEBG power station staff in England and Wales had occurred at Sizewell A. But he added: "We are convinced they are not due to radiation. This case, tragic as it is, is not due to radiation at Sizewell. It may be something in the air, something they have eaten. It may be chance. We just don't know." Dr Bonnell told the inquiry that people living near nuclear power plants receive less radiation exposure from them than in their own homes from consumer products like colour televisions, luminous watches, and smoke detectors. He claimed that nuclear industry workers were less at risk than people in some other occupations. "It may come as some surprise to note that on average aircraft crews receive annual doses almost one half of those received by classified workers on CEBG power stations," he said.

Reactor safety report 'not ready for a year', Penny Chorlton and Roger Milne, *The Guardian*, March 2nd 1983.

The Nuclear Installations Inspectorate has admitted that the independent safety assessment of the Central Electricity Generating Board's proposal to build Britain's first pressurised water reactor at Sizewell would not be resolved before the public inquiry ends early next year. Delays mean that the

public inquiry can not include discussion of the independent evaluation of the safety case. This is one of the principal purposes of the inquiry as defined by the Secretary of State for Energy, Mr Nigel Lawson. The NII has to issue a site licence before construction can begin, and Friends of the Earth, said that successive energy ministers had expected that before the hearing began the NII would have had enough information to grant a licence. Mr Michael Howard, QC, for the NII, said he was unable to supply the inspector with a list of outstanding safety questions. "There are a number of issues on which the NII does not know the intentions of the board," he said. The inspector promised to answer Friends of the Earth and criticised the NII's "failure to live up to public expectations." Crucial questions still to be resolved by the NII include degraded core accidents, fuel-clad ballooning, the integrity of the steam generator system, and external hazards such as earthquakes. Mr Stephen Bilcliffe, for Friends of the Earth, said: "We are not talking about the safety of an electric kettle; we are talking about a piece of hardware that could devastate a large tract of East Anglia."

Chemicals, Drugs and Pollution

Why a chemical firm sprayed Egyptian children with pesticide, Helen Howard, *New Scientist*, February 10th 1983.

Ciba-Geigy, the giant chemical company is defending its decision to spray six teenage children working in an Egyptian cotton field with a pesticide as part of a "field trial". The spraying of the pesticide, Galecron, took place in 1976, but only came to light during a recent Swiss TV programme. The Swiss-based firm, Ciba-Geigy, says that the spraying of unsuspecting individuals is "rare" but still happens. It is only done after tests on animals show that "the product will be safe under normal conditions," a Ciba spokesman, Anita Friedland, told *New Scientist*. In countries like Egypt, instructions to workers to stay out of fields after spraying and to wear protective clothing are widely ignored, she said. Often "kids walk into fields by mistake during spraying." Galecron (the brand name for the formulation, chlordimeform) was widely used as a pesticide before it was taken off the market briefly in 1976 after it was found to increase tumours in mice. Later it was reintroduced—but only to spray on cotton crops, where it was especially valuable because pests are resistant to DDT. Ciba denies that Galecron causes cancer in humans but admits to other ill-effects, notably bloody urine. A pressure group, the Berne Declaration has shown *New Scientist* confidential company reports showing that levels of the chemical in field workers from Latin America and Egypt regularly exceed the maximum permitted for the company's own employees. The fieldworkers report dizziness, headaches and diarrhoea, it says.

Call for check on medical records of 245T workers, Colin Brown, *The Guardian*, February 8th 1983.

An advisory committee looking into the safety of the chemical 245T has recommended that the medical records of workers who came into contact with it 20 years ago should be examined for a link with cancer. The committee, headed by Professor Robert Kilpatrick, effectively gave the chemical the all-clear but said that more investigation was necessary. Some unions have campaigned for 245T to be banned. Its report was started after an article in the *Lancet* had suggested a possible association between exposure to phenoxy-acid herbicides, chlorothenes or their contaminants and an increased risk of a rare type of cancer. The group of herbicides involved includes 245T. The committee recommended that there should be more research into past and future exposure to phenoxy-acids during their manufacture or use as herbicides.

15m tons of rock circling the Earth, The staff of *Nature*, *The Times* (Science Report), January 28th 1983.

It is hard to imagine how one could miss 15 million tons of rock circling the Earth a few miles overhead, but for the past 10 months just such a mass has been present in the form of a large dust cloud from the Mexican volcano El Chichón. Scientific investigations of the cloud have focussed on chemical reactions occurring within it, high in the stratosphere, for in addition to dust, the volcano also injected more than three million tons of sulphur dioxide gas high into the atmosphere. The gas is slowly converted into minute droplets of sulphuric acid, which form an aerosol layer in the stratosphere. Dr F. Arnold and Dr T. Buhrke of the Max Planck Institute for Nuclear Physics at Heidelberg, have now calculated that the conversion time is about two months. As the gas is gradually converted, it should cause the stratosphere to warm slightly, since the acid particles absorb sunlight. Already a local temperature increase of about 5°C has been detected in the stratosphere, and researchers predict that this will be followed in 1984 or 1985 by a northern hemispheric cooling of about half a degree centigrade at the Earth's surface. Small global temperature changes have been detected after eruptions in the past, notably that of Mount Agung on Bali in the earlier 1960s, but El Chichón promises to produce the largest cooling yet.

Rising pollution in drinking water alarms Ministers, Geoffrey Lean and Marek Mayer, *The Observer*, February 27th 1982,

Alarming increases of a polluting chemical in most of England's drinking water are revealed in unpublished Government documents in the hands of *The Observer*. The documents show that the Government is seriously concerned, and unpleasantly surprised, at rapidly rising levels of nitrates, which are increasingly suspected of causing stomach cancer.

They show that some of the country's drinking water is so contaminated that Britain will be in breach of an EEC directive on water quality when it comes into effect in 1985. The rising levels of nitrate are caused by dramatic increases in the amount of fertiliser used by farmers over the past two decades. The chemical, which is freely soluble in water, is swept off the land into rivers by rainfall, and percolates slowly into the ground. High levels of nitrate can kill babies, and the World Health Organisation has stipulated since 1970 that no more than 100 mg of the chemical should be allowed in each litre of water. But recent evidence that it may cause cancer has led the EEC to reduce the figure to 50 mg. A new study shows that the people of the Danish town of Aalborg, who for decades have drunk water containing just 30 mg of nitrate a litre, get more stomach cancer than people with less polluted supplies. Many English sources already exceed 50 mg and many more are approaching that level. It is believed that a series of complex reactions in the body convert the nitrates into nitrosamines, which are thought to be one of the most potent causes of cancer. England's drinking water comes, almost equally, from three sources: upland reservoirs and streams, lowland rivers, and underground water. The upland sources are scarcely exposed to fertilisers and so contain little nitrate. But the Government documents, reports of a joint committee of the Department of the Environment and the National Water Council, express alarm about the other two sources. At least a hundred ground-water sources already exceed the 50 mg limit, either consistently or intermittently, and at least 10 per cent of the water in the worst effected areas is over the limit. The committee makes clear that worse is to come. That is because water takes decades to percolate down to many ground-water supplies, and the huge amount of nitrates applied in fertiliser since 1960 has in many places still to work its way down. A confidential Organisation for European Co-operation and Development draft report, also obtained by *The Observer*, says that this 'nitrate front' is seeping down at the rate of a yard or two a year, and that the process will eventually cause most of Britain's groundwater supplies to exceed the 50 mg limit.

Detergents that do not wash away, Staff of *Nature*, *The Times*, February 18th 1983.

Man's pollution of this environment often goes unnoticed for many years before its full extent can be detected. Now a study by Japanese scientists has revealed the impact that artificial detergents have had in the Tokyo area. This shows that 25 years after their introduction their chemical residues remain in the environment. By analysing sediments from Tokyo Bay four scientists have been able to measure the amount of alkyl-benzene sulphonates (ABS), the active ingredient of the early man-made detergents, in layers of sediment from a core drilled in Tokyo Bay. Their results show that the highest levels of pollution occurred between about 1963 and 1975, with concentrations exceeding a thousand

nanograms of ABS per gram of sediment. Because they were able to identify the different chemical components in the sediment they can show that the ABS compounds have not been broken down by bacterial action since they were deposited. Unlike soaps, which undergo rapid decomposition by bacteria, detergents contain synthetic compounds which are resistant to attack. However, improvements to the chemical structure of the compounds used in detergents since the mid-1960s mean that those used nowadays are able to be consumed by bacteria and do not, therefore, remain in the environment for very long. Although the levels of ABS found are not high enough to pose a direct health hazard the residues left by non-bio-degradable detergents can nevertheless have important effects. Probably the most pronounced of these is that ABS compounds can dramatically reduce the amount of oxygen dissolved in water and sewage effluent. Since the bacteria which break down the sewage need oxygen to do their job, excessive levels of detergents can slow down and raise the cost of sewage treatment.

Reagan accused of wrecking acid rain talks, Catherine Caufield, *New Scientist*, February 3rd 1983.

Scientists from Canada and the United States have given up attempts to agree about what effect acid rain is having on the environment of North America. After more than two years of discussions they have decided to publish two separate statements, one from each country. The Canadian scientists on the working party blame political interference from Washington for their failure. The two countries signed a memorandum of intent in August 1980, when President Carter was still in charge in Washington. It committed them "to develop a bilateral agreement to combat transboundary air pollution". Four working groups were given the job of providing negotiators with scientific and technical information. They should have published their reports a year ago. In fact, a draft of the report of group I—on the effects of acid rain on the environment—has been ready for more than a year. But the two countries cannot agree on the crucial question of whether, as the Canadians maintain, the evidence shows an immediate need to fix a limit on emissions of sulphur dioxide. The official position of the US is that there is not enough information yet to justify expensive remedial action. Behind the breakdown in discussions are charges from the Canadians that the Reagan administration has systematically disrupted the work of the scientists. One Canadian official told *New Scientist* that scientists from the US have been replaced by "people with less relevant experience, and some who have been acting as political commissars". Since Reagan took office the two most important working groups (numbers I and IIIA) have each had three successive US co-chairman; "If you want to slow down the game," said another Ottawa official, "one good tactic is to keep changing the players". The US government also vetoed a plan to

have the reports of the working groups reviewed jointly by the US National Academy of Sciences (NAS) and Canada's Royal Academy of Sciences. The veto followed a report by the NAS, which concluded that action to reduce emissions should be taken. Instead there will be independent reviews. Canada's will be conducted by the Royal Society and the US's by a committee headed by William Nierenberg, who most recently chaired President Reagan's panel on the basing of MX missiles.

Regan rides out the 'Sewergate' storm, Nicholas Ashford, *The Times*, February 24th 1983.

It has been dubbed "Sewergate" and although the row raging around the Environmental Protection Agency is not threatening to bring down the Administration, it does share similarities to the Watergate scandal of a decade ago. Documents have been shredded, executive privilege invoked, tapes erased, EPA officials secretly investigated. From Congress there has been a growing chorus of allegations of corruption, perjury, "sweet-heart" deals, cronyism, political manipulation and blatant mismanagement. The EPA has been the subject of controversy ever since the President appointed Mrs Anne Gorsuch. The administration had made it clear it wanted to relax federal regulations over air and water pollution, toxic wastes, acid rain and some cancer-causing chemicals. At the heart of the dispute is a \$1,600m "superfund" set up by Congress three years ago for cleaning up hazardous wastes. Critics have charged that the EPA has been deliberately tardy in taking action and that deals have been struck with offending companies. Allegations of collusion were particularly directed at Miss Rita Lavelle, who was in charge of the "superfund" until she was summarily dismissed by the President earlier this month. It was noted that she was a former employee of a company that once dumped toxic materials at a site to be cleaned up by the Government and that her list of luncheon engagements read like the "who's who" of the chemical industry. The reasons for Miss Lavelle's dismissal were several. Among other things, she was found to have committed perjury when she denied under oath that she had started an investigation of an employee of the EPA who had been publicly critical of the agency's performance.

The Opren drug makers knew for 15 months, Oliver Gillie, *The Sunday Times*, February 27th 1983.

The potential danger of Opren, the arthritis drug that killed some 74 people in Britain and caused misery to thousands more, was recognised by the manufacturer 15 months before the drug was withdrawn. But the company failed to make the seriousness of the finding clear to the Department of Health or the Committee on Safety of Medicines. Answers to parliamentary questions asked by Jack Ashley MP—following the Sunday Times investigation

which first revealed the delay in suspending Opren—have shown that both the company Eli Lilly, and the health authorities are to blame for the delay. The dangers of Opren for old people became clear at a conference in Paris in 1981 organised by Eli Lilly. Two British geriatricians, Ronnie Hamdy and A. Kamal, independently came to the same conclusion—that Opren was eliminated very slowly from the bodies of old people. Both doctors passed their detailed conclusion on to Eli Lilly in the form of scientific articles. In July or August, 1981, executives from Eli Lilly told officials at the department of health about the studies on elderly people. However the articles by Hamdy and Kamal were not made available in written form until October. Five or six months had been wasted. Together with the independent studies of Hamdy and Kamal, the company supplied the department and the safety committee with additional studies of the way the drug behaved in old people made by the company at its laboratories in Basingstoke and Indianapolis. The conclusions of the company's studies were in conflict with the other two and so the committee decided to seek further scientific evidence. Eli Lilly has blamed the committee for causing delay. Questions asked by Jack Ashley in the Commons have now revealed that Opren was tested on only 52 British patients over 65—and only 500 altogether before the drug was licensed in Britain.

Crippled girl, 3, sues baby drug firm, Christine Doyle, *The Observer*, February 13th 1983.

The Australian doctor who first published evidence of an association between Thalidomide and birth defects could be a surprise witness in a lawsuit which claims that Debendox, the drug taken by millions of women for 'morning sickness' in pregnancy, is responsible for severe birth malformations. Dr William McBride, from Sydney, is putting the finishing touches to a study of the links between birth deformities in animals, believed to be monkeys, and the ingredients in Debendox, known here as Bendectin. His six-month investigation is expected to confirm the association. 'A number of the clinical studies which have been carried out with humans have been underrated. They have shown increased risk of malformation but have been dismissed on statistical grounds. I think they may be very significant,' Dr McBride said. The lawsuit, expected to begin shortly, seeks 'compensatory and punitive damages' from the manufacturers, Merrell Dow Pharmaceuticals, for Anne E. Koller, now aged three and living in Oklahoma; who was born with no arms, no right leg and a severely malformed left leg. Hers is one of seven lawsuits which have been filed for children with deformities, which include cleft palates, stubs for arms, severe, and possibly fatal hernias, and deformed and shortened bones. The Food and Drug Administration, which is the US drug safety agency, insists: 'There are no conclusive studies showing an association with extra risk.' It's a view echoed by many medical workers. However, the

agency did require the results of two preliminary animal studies, reported in 1981, to be included in the drug's labelling. One study showed a link with a potentially fatal hernia in rats and the other an association with holes in the hearts of unborn monkeys. The risk in these studies was thought to stem from doxylamine succinate, the anti-histamine which is combined with a vitamin in the drug. For 20 years Debendox also contained an anti-spasm drug but this was removed in 1976, when it was no longer considered effective. In Britain this component was removed last year. A Merrell spokesman insists the debate over the animal studies should not distract from the total human experience with the drug. 'It's impossible to say that anything is absolutely safe. But this drug has been used by 31 million women throughout the world, and has been carefully examined in 20 epidemiological studies. 'We cannot say there might not be an increase in a specific defect in any of the studies, but there are bound to be abnormalities occurring which would occur whether or not women took the drug.'

Lead report brings new alarm over petrol, *New Scientist*, February 3rd 1983.

The British government's claim that it is not necessary to remove lead from petrol received another body-blow last week. A report by a Ministry of Agriculture, Fisheries and Food provided the first official acknowledgment that lead fall-out from cars contributed significantly to the lead content of food. The government's case for retaining lead in petrol has been based heavily on the 1981 Lawther report. Lawther concluded that inhalation was the only significant source of human exposure to lead from vehicles. It contributed no more than 20 per cent of the lead in the blood of adults and 10 per cent in children. Now, however, a working party on heavy metals in food has concluded that 16 per cent of lead intake in the average diet comes from the contamination of food crops by lead—almost all of which comes from petrol fumes. That brings the officially acknowledged contribution of petrol-lead to blood-lead up to 30 per cent in adults and nearly 25 per cent in children and boosts the case against lead in petrol.

Censorship hits Turin lead survey, David Price, *New Scientist*, 17th February 1983.

Scientists have accused the European Commission of allowing the lead industry to censor an important report on the effect of lead in petrol. The report, which reviews an 18-month experiment, in Turin, Italy was altered by a steering committee which included representatives of petrol companies and makers of lead additives in petrol. The experiment found that some 25 per cent of lead in the bodies of Turin residents came from petrol. But the committee removed key sentences which suggested that flaws

in the experiment might have resulted in this being a serious underestimate. The published report reveals that the "vehicular fraction" of lead was 24 per cent. But it omits a crucial sentence that appeared in the scientists draft report which read: "These figures appear to be minimum values because a) the decrease in the isotopic ratio in blood probably had not reached equilibrium in 1979 and b) they reflect solely the contribution of the petrols affected by the lead isotopic ratio change," in other words, 18 months was not long enough for the "marked" lead to work its way through the local food chain. Lead from petrol bought outside the Turin area would not have been picked up in the study. In addition petrol-lead in food brought into the region would not be spotted. Meanwhile a similar experiment in Belgium suggests that the contribution of petrol exhaust to body-lead may be between 50 and 60 per cent.

Wildlife, Agriculture

Drainage of land threatens bird life, Ronald Faux, *The Times*, January 13th 1983.

Many land drainage schemes aimed at improving British agriculture at a cost of £150m a year are a waste of money and severely threaten wetland bird-life, according to the Royal Society for the Protection of Birds (RSPB). It says drainage played an important part in the development of post-war British agriculture, but now threatened all the remaining flood meadows and grazing marshes in England and Wales, the last strongholds of many species of wetland birds. Among schemes being promoted were those on the river Severn grazing marshes between Gloucester and Avonmouth, the Worcestershire Avon, the grazing marshes of the Yare and Waveney in Norfolk and the Derwent Ings in North Yorkshire. At the same time individual field drainage schemes were nibbling away the nature conservation value of the Somerset moors and the North Kent marshes. The results of such "improvements" were catastrophic for the redshank, snipe, shoveler and yellow wagtail which were robbed of wet grasslands for nest sites and feeding. Birds that spend the winter months in Britain, such as wigeon, pintail, Bewick's swan and ruff, were similarly deprived of safe havens. "Several species have declined in Britain directly as a result of drainage to a point where their continued survival as breeding birds is in imminent jeopardy outside a handful of nature reserves", says the RSPB. The society criticises the Ministry of Agriculture for the way such schemes were justified and for the "cloak of secrecy" around them. Methods used to assess their costs and benefits had serious flaws because financial benefits were assessed on the value of increased production. The calculations exaggerated the economic gains because no allowance was made for the fact that the price of farm products was already heavily subsidized. The rate-of-return figures

were also distorted, the report claims, because forecasts on the realization of the agricultural potential were over-optimistic. "Put bluntly, many projects are a waste of money and not in the public interest to grant-aid, even without taking nature conservation into account", the report says.

Nature Council boss sacked, Brian Jackman, *Sunday Times*, February 6th 1983.

Down on Sedgemoor in deepest Somerset, a war of words is being waged. On one side are local farmers, backed by the agricultural lobby and its powerful supporters in the Tory party. Their sworn enemy is the Nature Conservancy Council, the quango which looks after wildlife in Britain. The farmers have already drawn blood in a spectacular fashion. On January 25, Sir Ralph Verney, the council's chairman, went to the Environment Department expecting to talk to the minister, Tom King, about the pressing need for more staff. Instead he was kept waiting until eventually, not King but Neil McFarlane, his junior minister, appeared and told Verney that he would not be re-appointed when his three-year term expires in April. The sacking of Sir Ralph has its roots in the long and increasingly desperate struggle to halt the destruction of Britain's most important wildlife habitats—the so-called sites of special scientific interest—by intensive farming. West Sedgemoor is a part of the last great English Fen a precious relic of the wetlands which once spilled across 169 square miles of lowland Somerset. As the first important notification under the new Wildlife and Countryside Act, 1981. West Sedgemoor was seen as a test case by both sides. For conservationists in particular, it was a kind of Rourke's Drift—a last stand on behalf of a wetland refuge of international importance. But many farmers don't like their land being designated. Under the new Act, they are now required to inform the council of any intended changes to a site of special scientific interest which could be harmful to wildlife. But November 17, the Council met and approved the notification of all 2,500 acres at West Sedgemoor. There was only one vote against. That was cast by Sir Hector Monro, the former junior minister who was responsible for guiding the Wildlife and Countryside Bill through Parliament but who was dropped before its third reading, given a knighthood and, in the words of Charles Secrett, the wildlife campaigner of the conservation organisation, Friends of the Earth "dumped" on the conservancy council as a Council member. Events now moved swiftly. In January, Heseltine was switched to Defence, and Tom King became environment secretary. What has infuriated the conservationists is that the Conservancy Council appears to have been punished for refusing to break the law.