

ALL PARTY ORGANOPHOSPHATE (OP) GROUP

Briefing March 2002

Organophosphate Pesticides – Their Use and Abuse

OPs - What are they?

OP compounds were first recognised in 1854 and developed by Germany during the Second World War as a product of nerve gas development. They are the most widely used group of insecticides. They were introduced 40 years ago to replace organochlorines as OPs were supposedly safer. Organochlorines were found to persist in the environment and they were causing problems in the food chain.

OPs now account for some 38% of total pesticide use globally, although the figure for Western Europe is 26%. OPs are not only used in the agriculture industry: they are also found in products for treating headlice on children, shampoo for domestic pets and to kill pests that attack cereals and vegetables.

There are literally hundreds of commercial applications in the UK - ranging from headlice lotion for children to glass house sprays - used in homes, gardens and all sectors of agriculture. The users are often totally unaware of the potency of these chemicals.

Toxicology literature reveals a great lack of research into the safety of OPs. The only real research has focused on the acute hazards related to the manufacture of OPs rather than all those suffering long-term exposure to them.

2) OP Poisoning

OPs inhibit enzymes of the nervous system which play a vital role in the nerve impulse transmission. They can be absorbed through the skin, lungs, and eyes. The main symptoms of organophosphate long-term damage are excessive fatigue, sensory disturbance, dizziness, disturbance of higher cerebral function, problems with memory, with cognitive functions, with concentration, with problem-solving and language use, and difficulties dealing with life generally.

3) How are they controlled?

The approval, supply and carriage of OPs are subject to Government regulation to ensure that their use does not give rise to 'adverse ill health'. Ministers are advised by the Advisory Committee on Pesticides and Veterinary Products Committee members of which are independent of Government but tend to have gained their experience and expertise in the chemical manufacturing industry. Since 1993, purchasers and users of OP sheep dips have had to qualify for a Certificate of Competence, but other OP substances are not so restricted.

4) Warning Signs

In 1951 the Government had a Working Party to report on the problems of the new chemicals in agriculture. It was chaired by Lord Zuckerman – the Chief Government Chemist at the time – who presented a report entitled “Toxic Chemicals in Agriculture” which raised concerns that OPs could be absorbed through the skin and advocated that measures were needed for ‘adequate protection’ of people using them. Zuckerman’s report also recommended that the chemical itself should contain a dye so that it was easy to identify when splashes occurred and that labels on the containers should be worded “Deadly Poison”. This was as far back as 1951!

Advice from the Health and Safety Executive on protective and preventative measures was prepared in the 1980s (MS 17), but was NOT sent to doctors, vets and relevant consultants. OP sufferers have gone for years without being properly diagnosed. GPs and hospitals received very little guidance on diagnosing these symptoms and many victims were often thought to have quite different problems such as ME. Research has shown that stress (heat, physical, emotional) can increase the absorption of OPs. OP use during the Gulf War has been identified with Gulf War Syndrome. The Ministry of Defence was apparently unaware of MS17, and troops were indiscriminately exposed to OPs.

An HSE guidance factsheet called "Biological Monitoring of Workers Exposed to Organophosphorus Pesticides" more commonly known as MS 17 was first published in 1981. It was revised in 1986 and 1987 yet the information was never circulated to farmers, vets or doctors. It never even reached the MoD.

A BBC factsheet, "Disaster -The Chemical Sythe" written in January 1997 revealed that crucial medical and safety information was not provided or withheld and that the system for licensing chemicals and monitoring reactions was highly inadequate.

5) Summary of key events

5a) The on-off sheep-dip saga

OPs were introduced as a sheep-dip in the **1960s** under various sheep scab Orders. Sheep farmers were required to dip their sheep once a year, using an approved Government sheep dip. Almost all these contained OPs. Compulsory dipping was later extended to twice a year, and this scheme remained in place from 1976 to 1992.

Between 1976-1992 containers of OP products did state that the chemicals were potentially hazardous, but no protective clothing and equipment was recommended, nor did containers carry the warning sign of the skull and crossbones. HSE guidance notes were never circulated to doctors and hospitals: MS 17 was restricted to those employees manufacturing factories, not to the farmers who were having to use the chemicals on their sheep.

In 1992, the newly formed All Party Group met the Agriculture Minister – John Gummer – to urge for the withdrawal of OPs until the longer-term health side effects had been examined. The Group continued to monitor developments and meet Ministers on a regular basis throughout that Parliament. The requirement to dip was withdrawn shortly afterwards. It was only abolished when the then Minister of Agriculture, John Gummer, concluded that - faced with evidence of increasing incidence of sheep scab - it was ineffective.

The Committee which licences OPs for the use in agriculture is the same committee as that which monitors adverse reactions in both animals and humans. The objectivity of the committee has been questioned since scientists and advisers who have links with the agro-chemical companies dominate it: is this a conflict of interest?

The All-Party Group working with the Organophosphate Information Network (OPIN) urged the need for more comprehensive research into human ill health apparently caused by exposure to OPs.

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5(b) The OP problem spreads

The so-called Gulf War Syndrome suffered by returning troops has been linked to OPs since the symptoms are so similar. Paul Tyler asked Nicholas Soames, the Armed Forces Minister at the MOD, whether OP pesticides had been employed during the hostilities, and was told that its use was minimal

In December 1996, however, the Minister was forced to admit that the answer given in the commons was all wrong, and that several hundred troops had been sprayed with OP pesticides during the conflict. Clearly, the MOD was unaware of the long-standing HSE warnings about OPS, let alone the MAFF and DOH work,

Since **December 1996**, there have been four legal cases across the world where OPs have been cited as the cause of long-term chronic illness. The most recent UK example is that of Mr Shepherd who sued the agricultural college where he worked. The college settled out of court to the tune of £80,000 plus costs. Dr Goran Jamal has been involved with these cases and has been giving medical evidence.

Opposition Spokesman Michael Meacher's paper "Dangerous Dips - the truth about Organophosphates" was produced in **October 1996**. It indicated further risks to health in the form of damage to the nervous system, damage to bone cell function and suicide - Mr Meacher concluded that successive Governments had failed farmers and made recommendations similar to that of Zuckerman.

Soon after the May 1997 change of Government, the group met with Jeff Rooker and Dr Jack Cunningham at MAFF .He said that he could not ban OPs because of advice from Government lawyers.

5(c) New Government = new policy?

On **22nd May 1998** the working group of COT (Committee on Toxicity) met for the first time under the Chairmanship of Professor Woods. The remit of the group was:

"To advise on whether prolonged low-level exposure to Organophosphates, or acute exposure to OPs of a lower dose than causing frank intoxication can cause chronic ill health effects"

25th June 1998 - Official report on OPs to Ministers by Richard Carden was published. It highlighted a total of 11 departments that have never really been properly co-ordinated in the past. The remit of the group does not extend to judge whether they should be banned. It did however underline the lack of information and co-ordination, concerns which the All Party Group had been expressing to a succession of Ministers for years.

30th June 1998. Members of the All Party OP group met Environment Minister Michael Meacher at the DETR. Mr Tyler said after the meeting: **"In October 1996, as Shadow Secretary' of State for Environmental Protection, Michael Meacher published a full policy statement for the Labour party in which its conclusions and recommendations followed closely on those of our All Party Group. Specifically he committed Labour to a moratorium on the use of OP products in sheep dips. 20 months later there have been two changes affecting the situation; first, the evidence is mounting that OPs are unsafe to use, second, Mr Meacher has become a minister. For the sake of the unfortunate victims of OP poisoning -including the Gulf War veterans -this is no time to split legalistic hairs. I still regard Mr Meacher as an ally, but I'm far from sure what influence he has."**

30th July 1998 the Government was urged to investigate the use by multi-national chemical companies of students at British Universities to test dangerous pesticides. In the Commons Paul Tyler asked Agriculture Minister of State Jeff Rooker MP to authorise an urgent examination of reports in national newspapers that students in Manchester and Scotland had been subjected to tests. Mr Tyler drew the Minister's attention to the report by the US Environment Protection Agency, which expresses "deep concern" at such human tests.

In his reply the Minister acknowledged the importance of the issue, said his preliminary view was that the tests did not break international, UK Government or Royal College rules, but promised to investigate the situation further

Shortly after the Royal Colleges of Physicians and Psychiatrists issued a joint report: "Clinical .Aspects of OP sheep dip exposure".

In **January 1999**, representatives of the All Party Group met with Jeff Rooker MP,

Minister of State at MAFF, Rt Hon Tessa Jowell MP, Minister for Public Health and Minister for the Environment, the Rt Hon Michael Meacher MP, to discuss the most recent reports into the safety of OP pesticides. This was the first time that they had met ministers from more than one government department.

The group followed up on the Inter Departmental Report on OPs and discussed the problem of the lack of independent and reliable research into the safety of these chemicals. They also discussed the clinical aspects of long-term low dose exposure and how to improve the appraisal and monitoring of pesticides and veterinary medicines.

Reporting back to the group, Paul Tyler said:

"We pressed the ministers to review the balance between risk and cost on the one hand and convenience and commercial pressure on the other. They acknowledged that in the end, whatever the legal and scientific advice they received, Ministers had to take the policy decision. They also agreed with us that the move on to a new generation of safer pesticides, for the environment as well as human and animal health, cannot be left to the chemical giants themselves."

On **16th March 1999**, the officers of the All Party Group went to give their evidence to COT (Committee on Toxicity - Chaired by Professor Woods) at the Department of Health.

In **July 1999** the Institute of Occupational Medicine, based in Edinburgh, finally published its long awaited report on the health side effects of exposure to organophosphate pesticides. The report, following an exhaustive study by the Institute, provided authoritative evidence of the chronic effect of long term low dose exposure to OP sheep dips, in particular. It also drew attention to extreme dangers from concentrates, and underlined the failure to provide effective advice on protection over many years.

Mr Tyler held a special media briefing on **2nd July 1999** to update journalists, and on **24th July 1999** speaking at a conference of sheep farmers in Mid Wales, which included reports from OP victims in different parts of the country, Paul Tyler urged all OP victims to join in the group action.

27th July 1999- The OP group met to discuss:

- The Institute of Occupational Medicine study of nerve damage from long term and low dosage exposure to OP sheep dip (Members of the Edinburgh IOM team were there to answer questions)
- The forthcoming report from the Department of Health's Committee on Toxicity
- Progress with damages claims on behalf of sheep farmers who have been victims of OP poisoning
- Latest assessment of the role of OPs as a cause of Gulf War Syndrome,
- Investigation of the impact of OP lubricants used in aircraft engines, when released in pressurised cabins, following legal cases.
- Case studies of sheep farmers who have been offered or paid compensation on condition of secrecy following OP- related flock disasters.

Following the meeting of the group, MPs met Government Ministers to urge voluntary withdrawal pending the final outcome of research studies. "We believe that every day that these potentially poisonous products remain in use, now that the risks are so well known, increases the likely success of negligence and compensation claims."

On **15th September 1999** TUC General Secretary John Monks backed the campaign to ban Organophosphate pesticides.

On **12th November** an incident involving a toxic gas in a Swedish aircraft was recorded, which may be linked to a toxic engine lubricant, possibly an OP. The All Party OP Group with Ministers discussed this on 14th December 1999, as part of a general review of official advice, action and research requirements.

5(d) The 1999 COT REPORT

The Committee on Toxicity report came out on **26th November 1999**. It concluded that "neuropsychological abnormalities can occur as a long-term complication of acute OP poisoning". This affected primarily mental agility rather than long-term memory. There was no firm evidence on the risk of developing psychiatric illness.

Prolonged low-level exposure, however, did not appear to have "clinically significant effects". Further research was considered to be necessary in this field, for example whether it increased risk of neurological or neuropsychiatric disease.

The Veterinary Products Committee (VPC) also reported at this time in the light of the COT report and the Institute of Occupational Medicine's report, which was considered by the Committee's Medical and Scientific Panel. At the same time, the Advisory Committee on Pesticides (ACP) and Committee on Safety of Medicines (CSM) advised Ministers on the regulatory implications of the COT report.

On **20th December 1999** the Government responded with a four point plan. Baroness Hayman's statement read:

"The regulatory committees all take note from the COT report that any ill health effects from prolonged low-level exposure to OPs remain unproved, although there remains a question over whether there may be a small group of individuals particularly susceptible to OPs. They endorse the need for further research to address this and other areas of uncertainty identified by COT."

The Four Point Plan

- 1) On the research results of the IOM, that the main risk from OPs comes from the concentrate, OPs were withdrawn from the market until new containers could be introduced to minimise exposure. As of May 2000, delays are anticipated in this repackaging process which may leave farmers without supplies of OPs this year.
- 2) Action taken to revoke approvals for 3 OP compounds for which data packages were not submitted (apart from sheep dips any anticholinesterase pesticides must include full evaluations in line with modern safety standards).

- 3) Implementation of measures promoting best practice
- 4) Targeted research programme to take forward the research recommendations from COT and regulatory committees.

OPN received the COT/OP Working Group document with disappointment.

"The result was a weak-self contradictory document... the message - again - is that more research is needed." But the OPIN recommendation that the chronically ill people on its database should be clinically tested was accepted: an epidemiological study is being carried out. OPIN condemned that lack of useful data from the MCA, VMD Appraisal Panel, HSE and National Poisons Information Service.

Paul Tyler commented "To call for yet more research at this stage is an admission of its failure. Its necessity was apparent years ago Withdrawing concentrate containers for re-design is a pathetic response. At the very least, a voluntary moratorium on the USE of ALL OP products should be negotiated until all this research is completed. Then, and only then, will we know for sure whether the acknowledged risks can be justified."

John Smith MP asked a PQ **20th January 2000** about the implications of the COT report for sufferers of Gulf War Syndrome. The Secretary of State for Defence, John Spellar MP, replied:

"During the Gulf Conflict very few UK service personnel would have handled concentrated OPs. Those that did would have been Environmental Health Officers or technicians, or individual regimental hygiene duties personnel who were appropriately trained in procedures and use of equipment. There was no evidence of acute organophosphate poisoning or of subsequent unusual ill health arising in this small group."

"The case for ill-health effects resulting from long term low-level exposure to OPs remains unproven and there is currently no reason to believe that Gulf veterans who might have been in casual contact with dilute pesticide (e. g. from the treatment of tents and equipment) or with the malathion dust used to de-louse Iraqi prisoners of war, are at increased risk of long-term health".

5(e) Painstaking research or painful delaying tactics?

Research work into the effects of OPs is continuing in Lancaster University's department of Health Studies, the Institute of Occupational Health at Birmingham University and De Montfort University, Leicester. OPIN is advising practise nurses in Cumbria and Lancashire.

By **March 2000**, OP manufacturers were suggesting that producing new containers for OPs would be too costly, and they would be obliged to withdraw their products altogether. Bearing in mind the danger of a sheep scab explosion, Paul Tyler said "They

threaten to keep the product off the market, brow-beating both farmers and the Government. ...I hope that they are not trying to blackmail the Minister into backing down, or to withdraw OPs Without facing up to their legal responsibilities to OP victims"

The momentum for serious appraisal of the issues has been accelerated. During March 2000 the European Commission invited proposals for research projects to study the effects of pesticides on human and animal health. In Britain, independent scientists met with Agriculture minister Baroness Hayman and Industry and Government scientists on **28th March** to discuss organophosphates. Some of the scientists participating were carrying out schedules of work suggested by the COT report.

Mr Tyler attended the meeting on behalf of the All party Group and commented afterwards: "It has taken 50 years to get 40 of the country's leading experts in different parts of the scientific establishment talking to one another and identifying areas where work had been undertaken or needed to be done. I only wish it had happened earlier." He observed that while a significant amount of work had now been carried out on the health effects of OPs little work had been done on the diagnosis and treatment of sufferers. He said work needed to be done to find alternatives to OPs including non-chemical alternatives.

On **29th March 2000** a revised HSE guidance note, MS17 "Medical Aspects of Work-Related Exposures to Organophosphates" was issued. The HSE followed this with an explanatory news release of **14th April 2000**.

The note informs health professionals of the potential OP dangers and explains the role of biological monitoring and health surveillance in the protection of workers. It also clarifies points of confusion/concern, including repeated low-level exposure.

The new note was sent to DoH, the National Poisons Information Service, HSE's Employment Medical Advisory Service, and discussions are under way as to how to publicise the guidance.

Initially the Chief Medical Officer's Update, sent to GPs, and the Scottish equivalent, will contain articles, and other newsletters sent to GPs will be targeted.

This revised HSE advice updates and upgrades previous guidance. It does not - and cannot - explain why previous official advice was so much less stringent and why its circulation was so inadequate.

The House of Commons Agriculture Select Committee undertook a brief investigation of the MAFF December 1999 action, and the response by the OP manufacturers. The Committee took oral evidence from Lady Hayman, Minister of State, on **11 April 2000**, and received a written submission from Paul Tyler, as Chairman of the All Party OP Group.

The committee published its report on **23rd May 2000**. It concluded "We do not dismiss the sufferings of those whose ill-health has been linked to OP sheep dips but we believe it to be to the general benefit that OP sheep dip concentrates are restored to the market in suitably designed containers, together with all other practical precautionary measures, as soon as possible and that all sides should work together to make this happen."

On behalf of the All Party Group, Paul Tyler commented "If the Committee's report leads to renewed complacency -amongst users, manufacturers, or ministers - about the known toxicity of these pesticides, then it will be counter-productive. At a time when every ounce of ingenuity and enterprise should be devoted to the replacement of OPs by treatments which are safer to humans, but equally effective on sheep, wasting time arguing over the design of concentrate containers is criminal folly."

"The scourge of sheep scab will continue to grow while this delay in finding an acceptable alternative continues. In the interests of both animal welfare and human safety the Committee should have examined the accumulating evidence that OPs present too many risks, whatever the safeguards, and should not have ducked the real issue."

At this point MAFF gave approval for the reintroduction of OPs in modified containers.

In the meantime, early reports of research at Imperial College, London, and University College, London, seemed to confirm evidence of long-term low-level exposure to OPs damaging the brain and nervous system and causing verbal memory impairment. Reactions from the Department of Health are awaited.

Since then, a group action legal case brought by 12 alleged victims of OP poisoning was dropped by lawyers on grounds of inconclusive evidence, which would not be enough to win the case (Hodge, Jones and Allen, **October 2000**). This may yet have a knock-on effect on other cases. OPIN is told that they need to provide 99.9% clinical proof of a 'causal link' between ill-health and the chemical. The October newsletter says gloomily 'This is virtually impossible'.

5(i) OP Poison in the air?

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In Commons debates on 28th June and 28th July 2000 Paul Tyler drew attention to increasing concern about the evidence of leakage of toxic OP fumes into the aircraft cabin environment, all over the world.

The Australian senate had carried out an investigation of this problem which concluded during **October 2000** (full transcript can be found at the following address: www.aph.gov.au/senate/committee/rrat_ctte/bae/bae.pdf) with the following conclusions and recommendations:

1) The Committee's inquiry into the possible impact on air safety of cabin air quality in the BAe 146 aircraft indicates, as a general proposition, that chemicals introduced into an aircraft cabin can be an important factor in an aircraft's safe and comfortable operation.

Excessive levels of chemical contamination can affect two aspects of aircraft operations: the operational environment and the working and travelling environment; a fact apparent to airline operators, to aircrew and to every airline passenger .

- 2) While the BAe 146 is not unique among jet aircraft regarding the entry of oil fumes into the passenger cabins and cockpits, the BAe 146 is the focus of the majority of complaints of fume contamination made to Australian airlines. The BAe 146 was the source of the two most serious incidents of pilot incapacitation resulting from oil fume contamination of cabin air. However, the Committee also notes that several other aircraft have been identified during the course of the inquiry as suffering similar problems to the BAe 146 including A 320s and MD90s.
- 3) Although the incidence of reports of fumes affecting BAe 146 flight and cabin crews has reduced in the last three years, there appears to be no real possibility of such occurrences being eradicated totally as long as air is brought into the jet aircraft by bleeding air from its engines. There also is no current prospect of an alternative engineering arrangement being implemented in the BAe 146 for bringing air into the aircraft.
- 4) It appears to the Committee that contamination of cabin aircraft air on the BAe 146 aircraft has led to short-term and medium-term health problems for a number of BAe 146 flight crew. Some scientists link these health problems to contaminants, although the link has not yet been definitively established. Similarly, while definitive links have not been made between the toxic chemical components of Mobil Jet Oil II and illness in flight crew, this remains a question to be further investigated and assessed. "

The measures above were followed by comprehensive recommendations for research and monitoring of particularly the BAe aircraft - health of flight attendants and pilot, the engine and any smoking or leak problems.

Environment Minister Michael Meacher wrote to Paul Tyler, responding to his speeches and questions on this issue, announced that the Government would commission a comprehensive study of evidence of health risks to air passengers, taking into account Australian and other experience.

November 2000: 22nd November The Lords sub-committee on the aircraft cabin environment reported on their investigation into air safety issues. The report pointed out that there were hidden dangers to flying, and Paul Tyler renewed his demand that the UK Government press for an EU and world wide initiative to raise safety standards. Commenting, Mr Tyler said:

"I am especially concerned at the accumulating weight of evidence that the escape of toxic organophosphate (Of) vapour, from faulty engine lubricant mechanisms, could cause major problems. It is bad enough that passengers can be exposed to this

risk, but the consequences for the safety of the aircraft of pilots and crews are affected is alarming. The neurological effects on pilots and crews from low level exposure to these dangerous poisons are potentially disastrous. International action is long overdue."

December 2000; a preliminary response from Michael Meacher, Environment Minister, indicated continuing Government concern at evidence of risk from toxic fumes in aircraft, and a determination to continue monitoring incidents from all over the world:

"It is worthy of note that none of the pilots involved in the events on the CAA database or the known world-wide events have been fully incapacitated. However, partial incapacitation of varying degrees has been reported, e.g. smoke, fumes, odour etc. and instigation of the procedures described above have identified and isolated the cause. Of more concern are the reports that some incidents with the BAE 146 have not had strong cues to alert the pilots as to why they are feeling unwell. Seven such incidents are known to us, four in Australia, two in the UK and one in Sweden. These events are of great concern and, with the CAA we are closely monitoring the investigations being carried out in this area.

"The existence of long term health problems, attributable either in part or full to poor cabin air quality, is much more difficult to determine. The incident reporting procedures (Mandatory Occurrence Report - MOR scheme) is not intended to capture such cases, dealing as it does with primary aircraft safety. We are well aware of claims being made world-wide that health is being compromised and are actively reviewing the available data in this area."

5(g) Back on earth

October 2000. Rob Evan's new book 'Gassed' revealed that experiments with OPs were carried out at Porton Down Chemical and Biological Defence Establishment from the 1940s, giving the government a store of information about OPs that has been largely hidden to the general public.

The Phillips Report on BSE was published in late **October 2000**. This gave rise to promises of compensation to families of CJD victims. This decision is relevant to OP victims because it acknowledges that Ministers have a financial responsibility for their actions. Paul Tyler observed: "The rationale – that these personal calamities were the direct result of government policy – is exactly the same as that for compensating those farmers, farmworkers and their families who were poisoned by Organophosphate sheep dips."

The BSE inquiry also made a link between the use of OP Warble Fly dressings as a possible reason for the epidemic proportions of the disease in the UK. Paul Tyler commented : "I have argued for many years that the only logical explanation for the exceptional way in which BSE spread in Britain was that something was making our cattle more susceptible to the disease. I suggested both before and during the Phillips Inquiry, that the known impact of OPs on the central nervous system of animals (and

indeed of humans) was probably the reason for the extent of our tragedy. The Phillips Inquiry gives strong support for this view.”

January 2001: The Review Panel of the Legal Services Commission met to examine the appeal for the continuation of legal aid to victims of OP poisoning on 26th January by the All Party Group and was urged to maintain support since the case is in the public interest. On January 11th Paul Tyler and Rt Hon. Tom King meet with Ministers Baroness Hayman and Michael Meacher – the Ministers responsible from MAFF and DETR - to renew the apparent lack of progress.

June 2001: Following General Election and the retirement of Christopher Gill, Ian Liddell Grainger becomes Conservative Vice-Chair of the group.

November 2001: Representatives of the Group, including Lord (Tom) King, met Michael Meacher, Environment Minister, Elisabeth Charles (Gabb and Co Solicitors) briefed the meeting on the need for full disclosure from the OP manufacturers (whatever the commercial considerations) if any legal process was to be achieved.

At a hearing of the group action against a number of or manufacturers, on behalf of victims of sheep dip poisoning, Mr Justice Morland had said:

"However, I do not strike them out as having no realistic prospect of success because I cannot rule out the possibility that, if their claims were somehow provided with funding, disclosure of documents took place and expert evidence of causation were obtained, and if the other weaknesses surmounted, they might become viable"

Mr Justice Morland - 31st July 2001, page 15

The near impossibility of fulfilling all these requirements was demonstrated when he struck out four of these eleven cases. Subsequently - despite indicating just a few days previously that he was minded to let the remaining cases continue - he effectively stopped them all in **January 2002**. The imminent completion of an officially funded toxicology study, and the significance of the easier legal threshold for product liability claims, were swept aside.

On **28 February 2002** Paul Tyler wrote on behalf of the All Party Group to Michael Meacher: "The current legal situation is confused. It is not clear whether a further process is either available or fundable, in spite of the demonstrable public interest justification. "

An application under Human Rights legislation, or by any other European Court of Justice route, is under consideration. However, the need for the present case to continue through the UK legal system - to meet public interest objectives - is urged upon Ministers.

5(h) Continuing mystery in the air...and on the land

Meanwhile, there have been developments on other aspects of OP mystery and

controversy. The report of the Swedish SHK Board of Accident investigation into the incident on a BAe 146 aircraft on 12 November 1999 was published at the end of November 2001. This was the alarming episode - referred to on a number of occasions in the House of Commons by Paul Tyler - when Pilots were so badly affected by vapour in the cockpit that they almost blacked out and had to put on oxygen masks, and cabin attendants were similarly affected. The finger of suspicion pointed at OP jet engine lubricants being sucked into the ventilation system of the aircraft. Similar incidents were reported from other parts of the world, notably from Australia.

The SHK Report is very thorough and comprehensive but far from conclusive: it recommends (inter alia) -

"that an international database is established with factual information from flights where suspicion of polluted cabin air exists"

"that research efforts are initiated in regards to the characteristics of modern lubricating oils under very high pressure and temperature and their influence on the health of human beings."

A group of pilots and flight attendants who believe that they have been adversely affected by exposure to OP and other potential dangerous vapours have set up a website to exchange information and publicise their concerns - www.aopis.org

On behalf of the All Party OP Group Paul Tyler has continued to press relevant Ministers with Parliamentary Questions to respond to these various developments:

12/02/02

Mr. Tyler: To ask the Secretary of State for Transport, Local Government and the Regions if he will list the international studies and investigations of exposure to organophosphates in aviation engine lubricants, with particular reference to pilots and flight staff, which are under review in his Department; and if he will make a statement. [35402]

Mr. Jamieson: There are a number of investigations under way into episodic contamination from aviation engine lubricants that include, but are not confined to, the possibility of cabin air contamination by 'organophosphates'. This includes work in the UK involving the relevant aeroplane and engine manufacturers, the Civil Aviation Authority (CAA) and the Federal Aviation Administration (FAA).

14/02/02

Mr. Tyler: To ask the Secretary of State for Environment, Food and Rural Affairs if she will list the international studies of the effect of exposure to organophosphate pesticides, with particular reference to their use in agriculture, which are under review in her Department; and if she will make a statement. [35403]

Mr. Morley [*holding answer 12 February 2002*]: It would not be possible to list all of the studies, both national and international, which have been submitted by companies to support applications for approvals or for reviews of organophosphate pesticides. The information is not collected in this format and it would be too resource intensive and disproportionate in cost to collate one. For example, 171 published and unpublished studies were evaluated for the review of the organophosphate, chlorpyrifos and a list of over 2,000 other studies which were available was also submitted.

At the conclusion of these reviews, as is normal practice, the Advisory Committee on Pesticides evaluation documents will be made available and will include a list of the studies which have been evaluated. No evaluation documents have yet been published.

On **24 January 2002** Dr Goran Jamal gave evidence at the Congressional Hearing in Washington on Gulf War issues, and he has since met officers of the All Party OP Group to report back on the US investigations. Dr Jamal remains concerned that medical and scientific research needs - some specifically recommended by the 1999 COT study, endorsing the conclusions of the IOM team - still have not been met and appropriate research initiated. In particular, having accepted that serious neurological damage can result from handling OP concentrates, it is clearly urgent to explore the extent of autonomic nerve damage from different levels and periods of exposure to OPs. Given the very comprehensive research programme in the USA to establish the possible role of OP pesticides in the development of severe ill health amongst Gulf War veterans, it is obviously essential for the Ministry of Defence in the UK to take full advantage of this work. British service personnel deserve nothing less.

On **1st March** a research team from the University of Manchester published in **The Lancet** the results of their study. Professor Nicola Cherry from the team commented: "**The study was set up to test a clear hypothesis, that those whose genes produced a less efficient enzyme would, if exposed to organophosphates, be more likely to become ill. The results provide support for those who believe that repeated exposure to organophosphates may cause chronic ill health. Sheep dippers in the UK are one important group, but there are many others worldwide who are exposed to these chemicals and whose health may be affected as a result.**"

Paul Tyler commented: "This gives the lie to the suggestion that the victims are themselves to blame for clumsy use of these exceedingly dangerous chemicals. The refusal of the multi-national OP pesticide manufacturers to take any responsibility - legal or moral - for the huge risks they have imposed on users remains a blot on their reputation."

6) *Conclusions/Recommendations from the All Party Group*

A moratorium should be declared on the use of ALL organophosphates until an accurate assessment is made of toxicity, and the mechanism of damage, particularly in relation to long-term chronic effects as a result of cumulative exposure to OPS.

Footnotes:

1) The OPIN is a voluntary action group, now especially campaigning for more diagnostic centres to be established. It has also investigated the genetic problems that are manifest in the children of OP sufferers and helping farmers to get legal aid. Its database of reported OP poisoning victims is now being followed up by Ministry Officials.

2) The All Party group was formed shortly after the 1992 General Election and was formalised as a group in February 1998. The group now has 90 plus members from all parties and has cross-party support from Members from both Houses of Parliament. The Officers in 2001-02 have been:

Paul Tyler MP-Chairman and Secretary (Lib Dem), Countess of Mar - Vice Chair (Cross Bencher)

Ian Liddell-Grainger MP -Vice Chair (Conservative), Dr Ian Gibson MP -Vice Chair (Labour), Elfyn Llwyd MP - Vice Chair (P.C.), Roy Beggs MP -Vice Chair (UUP)

Recent News Coverage on Organophosphates

March 12 2002

"Air Travellers risk health in stuffy jets", The Scotsman

"The contaminant that causes most concern is tricresyl phosphate, which breaks down into elements that affect the brain and nerves. It is similar to the organophosphates in sheep dip that are linked to neurological damage in farmers."

March 10 2002

"Ministers hushed up report on the dangers of sheep dip", Sunday Telegraph

"A secret report which has only now come to light confirms that from 1991 onwards the Government was engaged in a systematic cover-up of the mass poisoning of thousands of farmers, and often their wives and children, by forcing them to use organophosphorus (OP) sheep dips. The confidential report, on a study carried out by the Health and Safety Executive, gives the lie to countless statements made over the years by ministers denying the dangers of sheep dips."

March 7 2002

"Spotlight falls on air threat to passengers", The Times

*" While toxic fumes may not be an issue for the occasional traveller, the Government wants to analyse the effects of low-level **organophosphate** chemicals on more regular travellers. "*

March 2 2002

"Genetic Link Sheep-Dip Sickness", Yorkshire Post

"The results of the survey of 400 farmers across the country published yesterday in the The Lancet medical journal offers fresh support to those who believe that repeated exposure to toxic organophosphates may cause persistent ill health. Scientists from Manchester University studied an enzyme found in blood which is responsible for breaking down an organophosphate used in sheep dip. "

February 12 2002

"French soldiers free of Gulf war illnesses", The Guardian

"Evidence to the [US] subcommittee on national security shows the effort made to protect service personnel from biological and chemical weapons is most likely to have damaged their health."

" The French were issued - with protective suits and not given the cocktail of drugs that British and US servicemen took. Only 140 of the 25,000 French Gulf veterans have reported illnesses related to Gulf war service, compared with more than 5,000 of the 52,000 British troops deployed, and 137,862 of the 697,000 US service personnel The French also made no use of organophosphorous pesticides, now known to be very dangerous to humans, and used bottled water, unlike US and UK forces. "

December 15 2001

"Cancer scare over fly spray used by millions", Daily Mail

"Government scientists on two expert committees have recommended a total ban on products containing dichlorvos. However, details have been kept secret until today because the manufacturer of the chemical sought a High Court gagging' order to block any publicity. The chemical is an organophosphate, the family of compounds used in nerve gas weapons. "

February 24 2002

"Salmon Farms: A Licence to Pollute", Scotland on Sunday

"The government's environmental watchdog in Scotland has been accused of "state-sponsored pollution" after licensing a massive increase in the use of toxic chemicals in salmon farmingAzamethiphos is under review by the Pesticides Safety Directorate for its effect on human health. It is an organophosphate and is being investigated for possible links to cancer"