Radioactive Materials in Southern England

1997 Update

Paul Mobbs,
October 1997

Paul Mobbs, 3 Grosvenor Road, Banbury, Oxon. OX16 8HN. 01295 261864 (telephone & fax)
Email - mobbsey@gn.apc.org Website - http://www.gn.apc.org/pmhp/

Introduction

Many people consider that much of Britain's problems with nuclear materials are restricted to Cumbria, or at a very few nuclear power stations across the country - they are not. Every day radioactive materials are carried on our roads, and although much of what is carried is of minimal risk, some cargos, such as nuclear warheads, present a major risk to the public.

In southern England there are a number of sites which release radioactivity into the environment. There are also sites which store 'low' and 'intermediate' level radioactive waste, and sites which contribute to the transport of radioactive material by rail or road as part of their everyday operation.

The purpose of this briefing is to highlight the range of sites that exist in southern England, and the campaigns opportunities they present.

Radioactive materials in southern England

There six main activities at involving radioactive materials in southern England...

- **Nuclear reactors:** There are no active nuclear power stations in southern England. The nearest operation plants are Dungeness in Kent, and Hinkley Point in Somerset and Oldbury in Gloucestershire. There was a nuclear power reactor at Winfrith in Dorset, but this has now closed and is being decommissioned. There is also a closed power station at Berkley on the Severn Estuary. There were a number of reactors for used for research purposes at Harwell and Aldermaston, but these had all closed by 1991. Finally, at Culham, there is the Joint European Torus (JET) experimental fusion reactor - this will close in the near future.
- **Civil nuclear research:** The main sites for civil nuclear research in southern England are Winfrith (although this is rapidly running down), Harwell and Culham. There is a wide range of nuclear and non-nuclear research carried out at these sites involving everything from renewable energy systems to the machining of plutonium.
- **Military weapons production and research:** Almost all of the UKs capacity for the development and manufacture of nuclear weapons is based at the Atomic Weapons Establishments (AWEs) in Berkshire. Aldermaston conducts research into the development of new nuclear weapons, and manufactures components for nuclear

warheads. Burghfield takes the component and assembles them in huge blast hardened bunkers. The assembled warheads are then moved by road to military armaments depots across the UK.

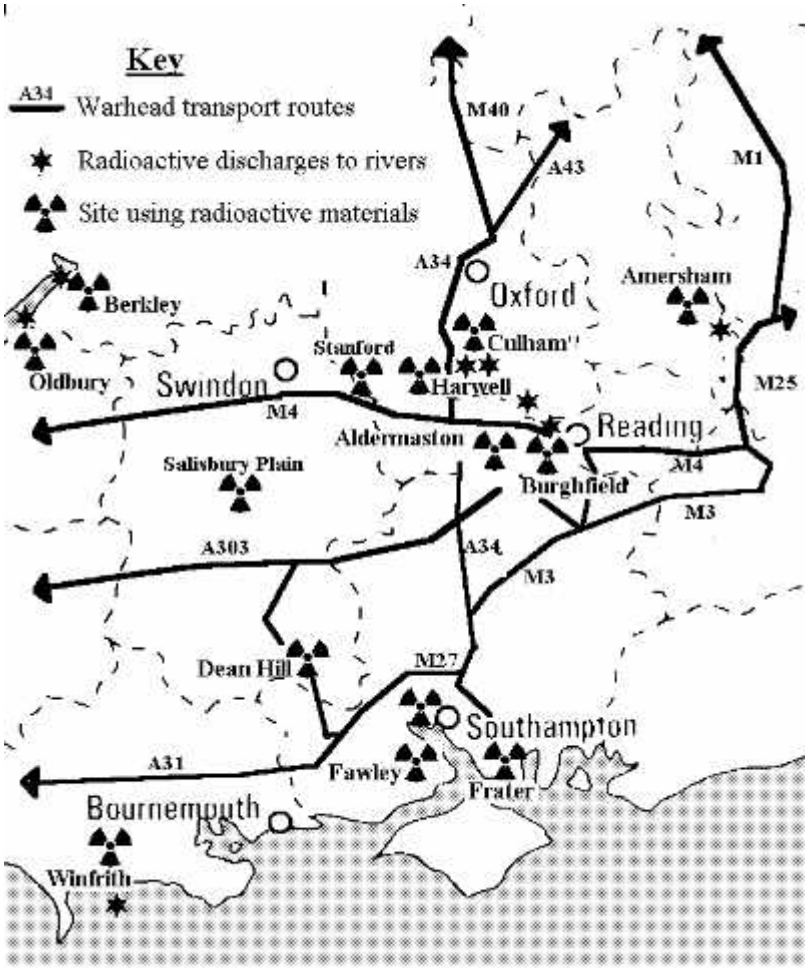
- **Radiochemical plants:** There are two sites in southern England which are involved in the production of radioactive sources and radiochemicals for used in industry, education, and in medicine. The major plant is at Amersham, the other is at Harwell, but both of them are run by Amersham International plc.

- **Radioactive waste storage and disposal:** There are a number of significant stockpiles of radioactive waste in southern England. Essentially the sites store low level wastes (LLW) and intermediate level wastes (ILW), until such a time as someone finds something to do with it. In summary:
  - ⇒ The largest stocks of radioactive material are held at Harwell and Aldermaston, and because of a previous special exemption from planning regulations the UK Atomic Energy Authority (UKAEA) at Harwell and the Atomic Weapons Establishment (AWE) at Aldermaston developed these stores without public consultation. That exemption was only lifted in early 1997, but AWE will use the Ministry of Defence's special development powers to build more radioactive waste stores over the next few years.
  - ⇒ Smaller quantities of waste are 'decay stored' across the region at hospitals and universities. Decay storage involves keep the waste in ventilated storage areas for one to five year to allow radioactivity to decay to lower levels. There is a new commercial facility at Culham which will bring radioactive was for decay storage in an old garage complex.
  - ⇒ Next, there are those sites which incinerate low-level radioactive waste. The main site for this is Rechem's chemical waste incinerator at Fawley. Harwell and Aldermaston used to run a low-level waste incinerators, but these were closed because of the gross pollution they caused.
  - ⇒ Finally, there are landfill sites which are licensed to accept LLW and 'very-low-level' (VLLW) for burial along with other types of household and industrial waste.

- **Transport:** Radioactive materials are also mobile around southern England:
  - ⇒ Spent nuclear fuel rods carried by rail- those from Dungeness, Bradwell in Essex and Sizewell in Suffolk travel around London and then on the West Coast Main Line (through Buckinghamshire). Those from Hinkley Point and Oldbury normally take the line directly from Bristol to Birmingham. But if there are line closures or other problems, fuel flasks can travel through Swindon/Reading, either running around London to the West Coast Main Line or taking the cross-country route through Oxford to Birmingham.
  - ⇒ The raw material for the manufacture of nuclear fuel rods - uranium hexafluoride or yellowcake - is imported through Southampton's container terminal, and is moved by road or rail to British Nuclear Fuels (BNF) plant in Cheshire.
  - ⇒ The materials for use in nuclear weapons and weapons research such as plutonium, uranium, tritium and beryllium are also moved by road. Most shipments travel from Sellafield in Cumbria or Llanishen (in Cardiff) to Aldermaston, but there are also shipments of plutonium for research between Aldermaston and Harwell along the A34.
  - ⇒ The most risky radioactive cargo on the roads are the nuclear warheads manufactured at Burghfield. These are moved in special convoys to the Royal Navy Armaments Depots (RNAD)/Royal Air Force (RAF) bases at RNAD Bull Point (Plymouth), RNAD Frater (Portsmouth), RAF Marham (Norfolk), RAF Honnington (Suffolk), and RNAD Coulport (Scotland).

Along with these various operations, radioactive materials are also disposed of into rivers and the sea, and of course into the air. The River Thames is a major sink for radioactive wastes as it receives the liquid LLW discharges from Harwell, Aldermaston, Burghfield (via the River Kennet), and Culham, as well as significant discharges from hospitals and universities in Oxford and Reading. Amersham International discharges into the Grand Union Canal through Maple Cross sewage works, and Winfrith discharges directly into Weymouth Bay.

☢ Radioactive facilities in and around Southern England



UKAEA Harwell

Harwell is the birthplace of the UK nuclear industry. It began work on the development of nuclear reactors for civil and military use, and the development of nuclear weapons, in the early 1950s. Aldermaston, Burghfield and Amersham were all at one time part of the UKAEA, the military operation were split off in 1971, and the lucrative radioisotopes work was privatised to form Amersham International in the early 1980s.

Harwell had two large, and one smaller nuclear reactors operating up until 1991. Until this date they had regulated their own safety, and consequently the safety of the reactors and other nuclear plants were compromised. Much of the nuclear plant on site is now being decommissioned - which in itself is causing higher levels of radioactivity to be discharged into the air. The excessive speed with which the UKAEA are trying to decommission the site has also caused a few accidents, resulting in the contamination of workers and the prosecution of the UKAEA by the Health and Safety Executive.

Since the closure of the reactors, much of the nuclear role of Harwell has been lost, and the non-nuclear parts of the business are beginning to take over:

- ⇒ Harwell is home to the Energy Technology Support Unit (ETSU) - the Government's renewable energy experts. But Harwell Laboratory site also houses other organisations such as the National Radiological Protection Board (NRPB) - who are in charge of radiological protection; UK Nirex - the Government's radioactive waste management (burial!) authority.
- ⇒ The Medical Research Council (MRC) - the work at Harwell involves experiments on animals using radiation.

⇒ Finally the National Physical Laboratory's Rutherford Appleton research labs. are sited here.

As well as nuclear problems, Harwell also has some significant non-nuclear problems. Because of the UKAEAs cavalier attitude to safety, for many years waste chemicals were dumped 'out the back' of the site. This has now caused massive groundwater pollution beneath the site, and the pollution has caused the public water supply at the nearby village of Blewbury to be contaminated with chlorinated solvents.

The future for Harwell at the moment is as a site for the storage of low and intermediate level radioactive waste. The UKAEA was given a 'Special Development Order' (SDO) in 1954 which allowed them to build anything in the pursuit of nuclear energy. To this end they have built more and more radioactive waste handling and storage facilities on the site. Harwell has, or still is accepting radioactive waste for storage from Aldermaston. The SDO was lifted this year, but there is still no clear indication that the management of the site, and the local authority, are properly applying planning regulations on the site particularly where it requires some form of public consultation.

Harwell, as well as discharging substantial quantities of activity to the air, discharges liquid waste into the River Thames in the middle of the village of Sutton Courtenay. According to the UKAEAs own monitoring reports, detectable levels of plutonium and fission products have been found in the riverbed downstream. The UKAEA also has a water treatment works in Sutton Courtenay - in 1992-93 environmental campaigners caught the UKAEA illegally dumping waste in a gravel pit behind the works, which was severely embarrassing for the AEA, and led to some large clean-up costs. High levels of radioactivity from surface water drains are also discharged to Lydebank Brook, which runs through a number of villages.

AWE Aldermaston/Burghfield and RNAD Frater/Dean Hill

Aldermaston and Burghfield are the UKs atomic bomb factories. The plutonium and other nuclear materials to make the bombs comes from the Ministry of Defence's reactors at Calder Hall and Chapelcross. This is processed at what was the 'Windscale' part of BNF Sellafield works, and this is then moved by road to Aldermaston. Other non-nuclear parts for the weapons are made in Cardiff and in Hertfordshire.

Aldermaston and Burghfield have recently been the subject of a public hearing run by Reading Borough Council, chaired by Helena Kennedy QC. The findings of the inquiry (available from Reading Borough Council) were that there are unknown risks associated with Aldermaston and Burghfield because of the secrecy surrounding their operation. There is little public accountability for the activities that go on there, and it was established during the inquiry that anyone working at the site faced an uncertain future should they ever publicly complain about safety.

Like Sellafield, there are higher than normal rates of cancer and leukaemia around the Aldermaston/Burghfield sites. This was a matter of much debate at the inquiry, there being a dispute between the health professionals who have observed the health effects, and the nuclear 'experts' who find it difficult to understand where all the radioactive material had come from to cause the effects. There was also a significant embarrassment for the National Rivers Authority (now part of the Environment Agency) who were prevented by the Government from undertaking monitoring of the groundwater around the AWE sites to check if there had been any contamination of groundwater. Thames Water has closed a water

borehole near Burghfield because of chemical and mercury contamination, but they are remaining very tight lipped about the exact cause of it.
Aldermaston discharges liquid chemical and radioactive wastes into the River Thames just south of Pangbourne. Burghfield discharges to the Thames via the River Kennet.

As stated, nuclear warheads are transported from Burghfield to 'special munitions' depots across the country. In southern England there is only one such depot - RNAD Frater near Portsmouth. This site holds the nuclear depth charges used by the Royal Navy.

Nuclear warheads are transported in special convoys; each convoy consists of one to three warhead carriers, accompanied by a police escort, one or two van loads of armed commandos, with a fire engine and communications vehicle following half a mile behind (in case anything goes wrong). The important thing is that the convoys always travel in daylight - if delayed they will normally stop-over at suitable equipped military bases such as RNAD Dean Hill (near Salisbury) and other such sites around the country. The routes the convoys take are always alternated for security reasons, and so it is difficult to say exactly which route the convoy will take on any particular run. However, the Nukewatch organisation has been very successful in tracking the convoys and has made a list of the routes commonly used. The routes most often used to each destination are:

- **Frater:** A4, A30, A33, A34, A340, M3, M4, M25, M27;
- **Bull Point:** A4, A31, A34, A35, A36, A303, A365, M4, M5, M3, M27;
- **East Anglia:** A1, A4, A34, A40, A43, A45, A340, A420, M4, M11, M25, M40;
- **Coulport:** A1, A4, A34, A43, A417, A419, A420, M1, M4, M5, M25, M40, M42.

UKAEA Culham

Culham is mainly an administrative centre for the UKAEA, with a few workshops and laboratories. The major part of the site is taken up the JET project - the European fusion research programmes' experimental reactor. Fusion power is often portrayed as clean, since it only involves fusing hydrogen to make helium. The truth is rather different. Because of problems getting the reactor working JET has recently been using tritium (a radioactive isotope of hydrogen) in experiments. This has increased radioactive discharges from the site. The use of tritium in fusion experiments also creates more contamination within the reactor due to the 'activation' of the reactor vessel; this may pose some problems during the decommissioning of the plant when it closes in a few years time.

Culham is now also the site of a low-level radioactive clinical and industrial waste transfer station - receiving radioactive waste from across the country, sorting, processing and packaging it, before sending it on for final disposal. A sound idea perhaps, but the buildings they are doing this in are a few old garages and vehicle workshops which have been ‘modernised’. The planning application for the change of use of the site was very badly handled by the authorities involved, causing severe embarrassment to the applicants (Safeguard International), and the local authority - South Oxfordshire District Council and Oxfordshire County Council. It would also appear that Safeguard International and the Environment Agency deliberately withheld information about an accident at Safeguard’s nearby Harwell facility until after planning permission was granted.

Culham is also home to Croft and Associates - a private company who design and manufacture the flasks which radioactive sources are transported in.

Oldbury, Berkley, Winfrith and Dungeness

These sites are the nearest power generating nuclear reactors. Of these four, Berkley and Winfrith have closed, and Dungeness is having technical problems.

Winfrith is another UKAEA site, and the reactor was unique in Europe. It was known as the 'steam generating heavy water reactor'. It had various problems over its lifetime, but was mainly kept running as the UKAEAs main source of power generation revenue. Unlike other nuclear reactors, it only had one loop in the steam generating circuit, rather than two loops and a heat exchanger. The practical problem with this is that the steam turbines became heavily contaminated and had to be disposed of ILW. In turn, during the 1970s, I have been told that the UKAEA were actually running out of workers to work on the turbines because they had all used up their allowable annual radiation dose. Today, the laboratory at Winfrith is slowly running down. It is mainly used now for research into the transport of radioactive waste, and is used as a centre for processing radioactive waste, for example super-compacting low and intermediate wastes before long-term storage (to reduce its volume).

Fawley

Rechem International run a chemical waste incinerator at Fawley on the Solent. If that wasn't bad enough, they have permission from the Environment Agency to burn low-level radioactive waste. They receive waste from hospitals, universities and industry, as well as wastes from UKAEA and AWE sites.

Amersham

Amersham International are one of Europe's main manufacturers of radiochemicals and radioisotopes. Some of the sources are very small, and have insignificant effects, but others can cause serious damage should they ever get loose from their transport containers - an example would be the large sources used in hospitals to treat cancer. There is not a lot of information available on Amersham, but in 1992/93 they caused a bit of a stir when they asked Her Majesty’s Inspectorate of Pollution (which later became part of the Environment Agency) for permission to mix VLLW and LLW in with their normal commercial waste for dumping into landfill sites in Buckinghamshire and Hertfordshire.

Amersham and AEA used to have very good relations - Amersham were in fact part of the UKAEA until they became the first government privatisation in the early 80s. But they have recently become competitors, and the resulting fall-out has meant that Amersham International are now applying to move all their radioactive waste from Harwell to their site in Cardiff. There is a strong campaign to stop this.

Southampton container terminal

Southampton is a major port, and part of the trade is carries out involves radioactive materials. Most of the spent fuel brought into the UK for reprocessing at Sellafield comes in via other ports such as Dover, Immingham, Barrow or Heysham. Southampton is mainly involved in the movement of radioactive materials of a 'low specific activity'. This includes the uranium ore (called yellowcake), or uranium hexafluoride, which are used to make nuclear

fuel rods. Uranium does not pose a great radioactive hazard as compared to a spent fuel rod, but it has a number of toxic effects on the body. Uranium hexafluoride actually poses a greater chemical hazard in the short-term than a radiological one should a mishap occur.

Most radioactive materials entering at Southampton are carried by rail - although they sometimes go by road. They are quite easy to spot as the container itself is marked with little radiation symbols and sometimes the letters 'LSA' (low specific activity). Shipments of uranium are usually marked with LSA.

Other sites

There is only one landfill site in the are used for the large scale disposal of radioactive waste - Stanford in-the Vale in south Oxfordshire. This site has now closed due to water and contamination problems. The nearest landfill used for radioactive waste dumping is Beddingham Quarry near Lewes. Landfilling of radioactive waste also took place at Harwell, and possibly at Aldermaston, but this has now been stopped. But because of the way we handle radioactive materials, you can be fairly certain that radioactive materials end up in most landfill sites taking industrial wastes. There is also a problem of radioactivity in sewage sludge because of radioactive discharges to sewers.

One further site to note is Salisbury Plain. There has been a switch in recent years in the materials used in armour piercing shells. Many munitions now incorporate depleted uranium as, because of its greater mass, it is more effective at making holes in steel plate. The downside of this is that fragments of uranium are scattered over the firing ranges. Some of the uranium also vaporises/burns on impact, so spreading it even further. Although the military will not admit any ill-effects from the use of depleted uranium, its use in munitions has been implicated as one of the possible causes of 'Gulf War Syndrome'.

The sites which have not been mentioned so far, because they are too numerous, are hospitals and universities. Radioactive sources are used in certain medical treatments, and modern chemistry and physics uses many radioactive materials either as an essential part of experiments or as a tracer/indicator. Many of the materials used are of low activity, and are commonly - on the advice of the Government - either dumped in with the normal rubbish or tipped down the sink. There is a list of Radioactive Substances Act (RSA) authorisations at the end of the report.

☢ Radioactive Waste

Radioactive waste is more commonly associated with Sellafield or Dounreay - but there is actually quite a lot of it in the South of England. There are significant quantities arising from AWE Aldermaston, and from the AEA's Harwell Laboratory. Detailed information on the amounts and composition of waste from each site in the UK are published in the '*The UK Radioactive Waste Inventory 1994*' (extracts from the inventory are available on my website - http://www.gn.apc.org/pmhp/).

One significant limitation to the UK Radioactive Waste Inventory is that it only considers 'solid' waste - liquid waste disposed to sewers or rivers, and gases disposed to air, are not included in the study. Quantities of waste actually arising are therefore significantly higher.

Waste that arises at sites is often very bulky. The 'as stored' column below represents the volume (in cubic metres) of raw waste. Usually radioactive waste is processed to reduce its volume before disposal - this involves compaction or incineration. However with ILW this process often involves packing the waste in concrete lined drums so the volume actually increases. The 'conditioned' column give the volume of the waste after processing. Finally, the weight of the waste is given in the 'mass' column.

Waste production to 2030, by site**

Site	Waste type	'As stored' m3	'Condi-tioned' m3	Mass te
UKAEA Harwell	ILW	3,609	6,269	4,733
operational &	LLW	78	374	94
decommissioning wastes	LLW/R	17,014	16,506	16,600
	All waste	**20,701**	**23,149**	**21,426**
UKAEA Culham	ILW	803	803	803
operational &	LLW	16,400	16,400	16,400
decommissioning wastes	LLW/R	66	44	44
	All waste	**17,269**	**17,247**	**17,247**
UKAEA Winfrith	ILW	1,030	1,436	1,302
operational &	LLW	25,378	13,794	24,175
decommissioning wastes	LLW/R	1,542	1,397	1,338
	All waste	**27,950**	**16,627**	**26,816**
Amersham International - Amersham	ILW	374	374	170
	LLW	-	-	-
operational waste	LLW/R	8,111	4,600	4,707
	All waste	**8,485**	**4,974**	**4,877**
MoD Aldermaston	ILW	9,143	7,238	5,619
operational &	LLW	253	202	101
decommissioning wastes	LLW/R	66,271	38,161	23,267
	All waste	**75,667**	**45,601**	**28,987**
MoD RARDE Fort Halstead	ILW	-	-	-
operational waste	LLW	-	-	-
	LLW/R	17	3	3
	All waste	**17**	**3**	**3**
Regional totals...	ILW	14,959	16,120	12,627
	LLW	42,109	30,770	40,770
	LLW/R	93,020	60,710	45,959
	All waste	**150,089**	**107,601**	**99,356**

** - includes committed decommissioning waste beyond 2030

The table shows the arisings in southern England's main waste producers. The waste is classed in three categories:

- ILW - intermediate level waste - this waste is very radioactive which has to be stored for many years before it becomes 'safe';
- LLW - low level waste - most LLW is sent to Drigg in Cumbria for landfilling, or it is incinerated and the ash is disposed at Drigg, or the waste is decay stored before disposal as LLW/R;
- LLW/R - this is LLW that is 'routinely' disposed of to landfill with other waste, or it is incinerated, because its radioactive content is not considered 'significant' enough to

employ special disposal techniques.

A significant issue that has arisen recently is the disposal of radioactive waste as ‘recycled’ materials. There is a significant difference between the 1991 and 1994 inventory reports - a lot of the LLW has been redefined as LLW/R. This has happened at the same time as a European directive has been drafted which would allow the recycling of materials contaminated with a low-level of radioactivity to be recycled with other was, quite probably into goods which will then be used in the home. There is currently a Europe wide campaign to stop this ‘back door’ disposal of radioactive materials run by anti-nuclear groups.

One final point - much of the conditioning of ILW in southern England takes place at AEA Technology’s ‘supercompaction centre’ at Winfrith in Dorset. Therefore although Winfrith has it own entries in the inventory for waste arisings, the volumes being moved in and out of Dorset are much higher as waste is shipped ‘as stored’ in to Winfrith for processing, and then back out again as ‘conditioned’ waste.

☢ What is to be done?

The previous pages have outlined how southern England is affected by the use of radioactive materials, for commercial, academic, medical, research and military purposes. In many ways, the use of radioactive materials can be likened to any other resource use issue; there are issues of how well and efficiently the materials are being used, there are arguments for increasing use of waste minimisation and recycling to reduce the overall production of radioactive materials, and finally there are arguments about a general waste management strategy, and whether or not the availability of disposal by landfill and incineration actually encourages wise use of these resources.

In the same manner as campaigners deal with household, commercial and industrial wastes, if we can block off the means of easy disposal - and in the case of radioactive materials that means dumping in landfills, sewers, rivers, or incineration - then we increase the cost of radioactive waste management. The increase in costs will then 'price-in' options such as recycling, reuse, and waste minimisation. What this means in practice is opposing any attempt to dispose of radioactive materials in the ways listed above.

To find out about radioactive materials in your area you have three options...

- **Environment Agency:** The Environment Agency regulates the keeping and disposal of radioactive materials. They keep details of site licensed to keep radioactive materials and to dispose of them, and this information is available to the public. For more information contact:

  ⇒ Thames Region: Kings Meadow House, Kings Meadow Road, Reading, RG1 8DQ. Tel: 01734 535000. Fax: 01734 500388

  ⇒ Southern Region: Guildbourne House, Chatsworth Road, Worthing, Sussex, BN11 1LD. Tel: 01903 832000. Fax: 01903 821832

- **Environmental Health Departments:** District EHDs are not normally very helpful, mainly because they have very little responsibility for radioactive materials, but they should be able to give you a list of all local sites licensed to hold radioactive materials.

- **Environmental Activism Web Site:** My site on the Internet where information on RSA authorisations and other radioactivity related issues is maintained. The URL is

http://www.gn.apc.org/pmhp/

From then on, how you develop a campaign is up to you and your local circumstances. Further help and assistance can be given. But there is one area which can be very useful to campaign on....

☢ Emergency Planning

The emergency planning directive, 89/618/Euratom (Official Journal of the European Communities 7/12/89 [357/31-34]) specifically deals with informing the public about health measures to be applied, and steps to be taken, in the event of a radiological emergency. It came into effect in November 1991.

This directive is a step on from the previous one drawn up post Chernobyl (directive 87/600/Euratom) and is intended to define, at a Community level, common standards for measures and general procedures for informing the general public and improving public protection in the event of a radiological emergency. A 'catch all' clause means that the directive covers all radiological hazards, specifically:

- any nuclear reactor, wherever located;
- any other nuclear fuel cycle facility;
- any radioactive waste management facility;
- the transport and storage of nuclear fuels or radioactive wastes;
- the manufacture, use, storage, disposal and transport of radioisotopes for agricultural, industrial, medical and related scientific and research purposes;
- the use of radioisotopes for power generation in space vehicles.

The directive sets minimum requirements for the type of information to be supplied to the public who may be at risk from an incident at their local site, and it requires this information to be issued automatically. It must to be issued as soon as any new emergency plans are completed. If any changes are made in the plans, the updated information must also be circulated. The information must include details of:

- what radioactivity is and its effects on human beings and the environment;
- various types of radiological emergencies and their consequences for the general public;
- emergency measures to be taken to alert, protect and assist the general public; what action to take in case of an emergency locally.

In the event of an incident involving a release of radioactivity likely to breach radiological protection standards for those around the site, the emergency services/site operator must inform the population affected immediately of the steps they should take to safeguard their health. This information must consist of:

- details of the type of emergency which has occurred, and where possible its characteristics, origin and probable development;
- advice on radiological protection measures covering action to take to minimise dose, decontamination, restrictions on the consumption of foodstuffs, use of protective substances and evacuation (if necessary).

Should the alert be raised before a possible incident, similar information is also required to be issued, along with information on how to prepare for the incident, and advice to those groups particularly affected (e.g. children). Any person who may be involved in providing

emergency assistance (e.g. police, medics) must be provided with similar information to that issued to the public, but also concentrating on what their intervention may mean for their health, and what steps to take to ensure as little risk as possible. This again must be done as soon as plans are drawn up. Regular updates must also be supplied if any new information comes to light.

The directive is a major step forward from the current position, where the emergency measures taken depend upon the facility concerned, or the level of planning which a local authority has been able to progress to. The directive sets minimum requirements, and puts the onus on government to provide information to the public and emergency service personnel. This is good in two respects. Firstly it will prepare the public for possible radiological incidents in the future, and will perhaps reduce the casualties in any such incident. Secondly, it will bring home to the public, especially those around nuclear installations, the risk implicit in the everyday operations of the nuclear industry.

The fact that it covers all radiological hazards means that it also has implications for the transport of radioactive materials. It could be argued that any road or rail route which is regularly used to carry radioactive materials would fall under this directive, and the local authorities should draw up emergency plans and issue information to those living along the route. More importantly, because it can be assumed that radioactive materials will be carried on any trunk road, or on any railway line taking freight, local emergency planners should issue relevant emergency information to those living near these routes. Again this could have important implications for the way in which the public perceive and react to the actions of the nuclear industry in the UK.

This directive, because of its inclusion of transport accidents, can provide a very useful tool for campaigning at local level. You should get in touch with your nearest emergency planning department, which will be situated at the District or County Council, and ask them for your emergency information on what to do if, for example, a warhead convoy falls off you local bypass, or an aeroplane carrying radioactive materials falls out of the sky. Most local emergency planners don't have much information on the directive, or how much radioactive material there is in the area, and so they will have to struggle a bit to provide an adequate response. If you are not happy with their response you should complain to the chief executive of the council, and then if you still get no proper answer, the European Commission (please get in touch for details of how to do this).

If there is a site in your area which does hold radioactive or dispose of materials you should ask your local authority for the emergency plan. You have a right to see it, although many emergency planners are not keen on giving out what is essentially a booklet on the most likely disaster at your nearest nuclear site - but be persistent.

The best thing about any campaign involving nuclear and radioactive materials is that you don't really need to extensive research - a letter from a local authority just admitting that a certain activity could take place is enough. For example, in 1987 a warhead carrier overturned near Dean Hill, and if it happens once, it could happen again. If you can demonstrate that nuclear warheads are being driven down your nearest trunk road, or you can highlight the tipping of radioactive materials down the sink at you local university, then you can guarantee some press coverage. And what is better, the fact that you local authority has no plans on how to deal with any accidents adds real embarrassment value to any story!

☢ Radioactive Substances Act, Authorisations June 1996

Many industries use radioactive materials. The holding or use of any radioactive materials requires that the holder be licensed under the Radioactive Substances Act, 1993. Details of the authorisation granted under the Radioactive Substances Act (RSA) are available to the general public.

A complete list of the RSA authorisation for England and Wales is posted on my web site (http://www.gn.apc.org/pmhp/). What follows are the RSA authorisations for Southern England (Berkshire, Buckinghamshire, Dorset, Hampshire, Oxfordshire, West Sussex, Wiltshire, Isle of Wight)

Just because a site has an RSA authorisation, it does not mean that radioactivity is being discharged to air or to sewers. Quite often radioactive sources are sealed. But the very fact that the public makes enquiries about the types and uses of radioactive substances on a site will make the site operator a little more cautious about their care. This list gives you the opportunity to check.

The fact that an authorisation exists does not mean that radioactive substances are being held on the site. Sometimes the authorisation is just for temporary storage.

On the list the authorisations are grouped by local authority area. The unique identification number is given for each authorisation so that you can check with the Environment Agency that the authorisation is still in effect, and you should be able to get copies of the public register in the post (usually for free). The next column gives a code which tells you about the status of the authorisation at the time the list was compiled (June 1996). The codes indicate:

- 'Eff' - effective - the authorisation is in effect;
- 'App' - approved - the authorisation has been recently approved, but is not in effect;
- 'Rec' - received - an application has been received, but not approved;
- 'Val' - valid - a valid authorisation exists, but it is not necessarily in use.

Finally, the name of the site which the authorisation covers is listed in the last column. Sometimes there is more than one authorisation for one site - this is usually because there are different buildings of plants involved.

Having found a site of interest, you should contact the Environment Agency region the site is in to find out where the public register is held. You can then go and see the register, or ask for a photocopy to be sent to you (the Agency usually don’t charge the public for the first £50, but you should always check what the charge will be). When you get the information you can then see precisely what is being held on the site.

The sites are listed by the old local authority boundaries (pre-reorganisation). The list is ordered by district council in alphabetical order - the following districts are given for each of the counties listed in the table below.

If you discover that any site is holding radioacive materials which is not on this list you should check with the Environment Agency to see if an authorisation exists. If it does not then you should pester the Agency to go in straight away to ensure that all materials are safely stored, and that any disposal operations are properly carried out.

Berkshire	**Buckinghamshire**	**Dorset**	**Hampshire**	
• Bracknell Forest • Newbury • Reading • Slough • Wokingham • Windsor & Maidenhead	• Aylesbury Vale • Chiltern • Milton Keynes • South Buckinghamsh. • Wycombe	• Bournemouth • Christchurch • East Dorset • North Dorset • Poole • Purbeck • West Dorset • Weymouth & Portland	• Basingstoke & Dean • Eastleigh • East Hampshire • Fareham • Gosport • Hart	• Havant • New Forest • Portsmouth • Southampton • Rushmoor • Test Valley
Oxfordshire	**Surrey**	**West Sussex**	**Wiltshire**	**Isle of Wight**
• Cherwell • Oxford • South Oxfordshire • Vale of the White Horse • West Oxfordshire	• Elmbridge • Epsom & Ewell • Guildford • Mole Valley • Reigate & Banstead • Runnymede • Spelthorne • Surrey Heath • Tandridge • Waverley • Woking	• Adur • Arun • Chichester • Crawley • Horsham • Mid Sussex • Worthing	• Kennet • North Wiltshire • Salisbury • Thamesdown • West Wiltshire	• Medina • South Wight

Authorisation List

Adur District Council	/AR2015	Eff.	RICARDO CONSULTING ENGINEERS PLC, BRIDGE WORKS, SHOREHAM-BY-SEA, WEST SUSSEX, BN43 5FG
Arun District Council	/AC4775	Eff.	ALLPRESS BELGRAVE AND PARTNERS, TORTINGTON EQUINE CLINIC, ARUNDEL, WEST SUSSEX, BN18 0BG
	/AH5094	Eff.	HORTICULTURE RESEARCH INTERNATIONAL, WORTHING ROAD, LITTLEHAMPTON, WEST SUSSEX, BN17 6LP
Aylesbury Vale District Council	100802 /AU2280	App.	THE UNIVERSITY OF BUCKINGHAM, LIFE SCIENCES BLOCK, THE UNIVERSITY OF BUCKINGHAM, HUNTER STREET CAMPUS, BUCKINGHAM, BUCKINGHAMSHIRE, MK18 1EG
	100808 /AQ4004	Eff.	STOKE MANDEVILLE HOSPITAL NHS TRUST, MANDEVILLE ROAD, AYLESBURY, BUCKINGHAMSHIRE, HP21 8AL
	101153 /AO5573	Eff.	RAF INSTITUTE OF PATHOLOGY AND TROPICAL MEDICINE, HALTON, AYLESBURY, BUCKINGHAMSHIRE, HP22 5BW
	101154 /AO0326	Eff.	PRINCESS MARY S RAF HOSPITAL, NUCLEAR MEDICINE DEPARTMENT, HALTON, AYLESBURY, BUCKINGHAMSHIRE, HP22 5PS
Basingstoke And Deane	/AK2564	Eff.	NORTH HAMPSHIRE HOSPITALS NATIONAL HEALTH SERVICE TRUST, BASINGSTOKE DISTRICT HOSPITAL, ALDERMASTON ROAD, BASINGSTOKE, HAMPSHIRE, RG24 9NA
Borough Council	/AU4274	Eff.	SMITHS INDUSTRIES AREO AND DEF, WINCHESTER ROAD, BASINGSTOKE, HAMPSHIRE, RG22 6HP
Bournemouth Borough x Council	100216 /AN1823	Eff.	BIOGENESIS LTD, 7 NEW FIELDS, STINSFORD ROAD, POOLE, DORSET, BH17 0NF
	101268 /AS5415	Eff.	ROYAL BOURNEMOUTH AND CHRISTCHURCH HOSPITALS, ROYAL BOURNEMOUTH HOSPITAL, CASTLE LANE EAST, BOURNEMOUTH, BH7 7DW
	101469 /AQ4373	Eff.	WHITE ROSE ENVIRONMENTAL, CLINICAL WASTE INCINERATOR, ROYAL BOURNEMOUTH HOSPITAL, CASTLE LANE EAST, BOURNEMOUTH, BH7 7DW
Bracknell Forest Borough	/AE6540	Eff.	HEATHERWOOD AND WEXHAM PARK HOSPITALS TRUST, HEATHERWOOD HOSPITAL, LONDON ROAD, ASCOT, BERKSHIRE
Council	/AU0317	Eff.	ZENECA AGROCHEMICALS, JEALOTTS HILL RESEARCH STATION, BRACKNELL, BERKSHIRE, RG42 6ET
Chichester District Council	100294 /AU2719	Eff.	ROYAL WEST SUSSEX NHS TRUST, ST RICHARDS HOSPITAL, SPITALFIELD LANE, CHICHESTER, WEST SUSSEX, PO19 4SE
Chiltern District Council	/AF3899	Eff.	AMERSHAM INTERNATIONAL PLC, AMERSHAM LABORATORIES, AMERSHAM, BUCKINGHAMSHIRE, HP7 0HJ
	101003 /AQ3253	Eff.	JOHNSON AND JOHNSON CLINICAL DIAGNOSTICS LTD, POLLARDS WOOD LABORATORIES, NIGHTINGALES LANE, CHALFONT ST. GILES, BUCKINGHAMSHIRE, HP8 4SP

Chiltern (cont)	/AG2847	Rec.	AMERSHAM INTERNATIONAL PLC, AMERSHAM LABORATORIES, ST. GEORGES INDUSTRIAL ESTATE, WHITE LION ROAD, AMERSHAM, BUCKINGHAMSHIRE, HP7 9LL
Crawley Borough Council	/AS7949	Eff.	UPJOHN LTD, FLEMING WAY, CRAWLEY, WEST SUSSEX, RH10 2LZ
East Hampshire District Council	/AC6956	Eff.	WALMSLEY MANTELL AND PARTNERS, THE EQUINE VETERINARY HOSPITAL, LIPHOOK, HAMPSHIRE, GU30 7JB
	/AS1029	Eff.	FORESTRY AUTHORITY RESEARCH DIVISION, FOREST RESEARCH STATION, ALICE HOLT LODGE, WRECCLESHAM, FARNHAM, SURREY, GU10 4LH
Elmbridge Borough Council	/AV4563	Rec.	SMITHKLINE BEECHAM PLC, SMITHKLINE BEECHAM CONSUMER HEALTHCARE, ST GEORGES AVENUE, WEYBRIDGE, SURREY, KT13 0DE
Epsom And Ewell Borough Council	100305 /AJ8346	Eff.	EPSOM HEALTHCARE NHS TRUST, WEST PARK HOSPITAL, HORTON LANE, EPSOM, SURREY, KT19 8PB
Gosport Borough Council	/AC2349	Eff.	CYANAMID UK LTD, CYANAMID HOUSE, 154 FAREHAM ROAD, GOSPORT, HAMPSHIRE, PO13 0AS
	/AJ4413	Eff.	ROYAL NAVAL HOSPITAL, DEPARTMENT OF NUCLEAR MEDICINE, HASLAR, GOSPORT, HAMPSHIRE, PO12 2AA
	/AM4592	Eff.	MOD, INSTITUTE OF NAVAL MEDICINE, ALVERSTOKE, GOSPORT, HAMPSHIRE, PO12 2DL
	/AV5381	Rec.	MOD, INSTITUTE OF NAVAL MEDICINE, ALVERSTOKE, GOSPORT, HAMPSHIRE, PO12 2DL
Guildford	/AS8210	App.	UNIVERSITY OF SURREY, UNIVERSITY SITE, GUILDFORD, SURREY, GU2 5XH
Borough	/AC9220	Eff.	NE SURREY COLLEGE OF TECHNOLOGY, REIGATE ROAD, EPSOM, SURREY, KT17 3DS
Council	/AD7745	Eff.	GUILDHAY ANTISERA LTD, UNIT 6, RIVERSIDE BUSINESS CENTRE, WALNUT TREE CLOSE, GUILDFORD, SURREY
	/AE3826	Eff.	ST LUKES HOSPITAL, WARREN ROAD, GUILDFORD, SURREY, GU1 3NT
	/AT6557	Eff.	ROYAL SURREY COUNTY AND ST LUKE S TRUST, ROYAL SURREY COUNTY HOSPITAL, EGERTON ROAD, GUILDFORD, SURREY, GU2 5XX
	101051 /AP0909	Eff.	BBSRC INSTITUTE FOR ANIMAL HEALTH, PIRBRIGHT LABORATORY, PIRBRIGHT, WOKING, SURREY, GU24 0NF
Havant Borough	/AC1369	Eff.	APOLLO FIRE DETECTORS LTD, 6 SOLENT ROAD, HAVANT, HAMPSHIRE, PO9 1JH
Council	/AC1385	Eff.	APOLLO FIRE DETECTORS LTD, 6 SOLVENT ROAD, HAVANT, HAMPSHIRE, PO91 1JH
	/AD7443	Eff.	SLS, WALTON ROAD, PORTSMOUTH, HAMPSHIRE, PO6 1TD
Horsham District Council	/AL6310	Eff.	TESLA ENGINEERING LTD, FACTORY UNIT 3, WATER LANE, STORRINGTON, PULBOROUGH, WEST SUSSEX, RH20 3EA
	/AT5747	Eff.	CIBA PHARMACEUTICALS, WIMBLEHURST ROAD, HORSHAM, WEST SUSSEX, RH12 4AB
Mid Sussex District Council	100188 /AT2446	Eff.	BLOND MCINDOE CENTRE, QUEEN VICTORIA, HOLTYE ROAD, EAST GRINSTEAD, WEST SUSSEX, RH19 3DZ
	100209 /AN7325	Eff.	MID SUSSEX HOSPITAL, PRINCESS ROYAL HOSPITAL COMPLEX, LEWES ROAD, HAYWARDS HEATH, WEST SUSSEX, RH16 4EX
Milton Keynes Borough	100672 /AU9098	App.	HOECHST ROUSSEL LTD, WALTON MANOR, WALTON, MILTON KEYNES, MK7 7AJ
Council	100663 /AE4628	Eff.	EG AND G LTD, 20 VINCENT AVENUE, CROWNHILL, MILTON KEYNES, BUCKINGHAMSHIRE, MK8 0AB
	100667 /AG2707	Eff.	PHARMACIA LTD, DAVY AVENUE, KNOWLHILL, MILTON KEYNES, BUCKINGHAMSHIRE, MK5 8PH
	100669 /AO0202	Eff.	MILTON KEYNES GENERAL NHS TRUST, MILTON KEYNES GENERAL HOSPITAL, STANDING WAY, EAGLESTONE, MILTON KEYNES, MK6 5LD
	101679 /AS8457	Eff.	THE OPEN UNIVERSITY, OPEN UNIVERSITY CAMPUS, WALTON HALL, MILTON KEYNES, MK7 6AA
	100667 /AV4652	Rec.	PHARMACIA AND UPJOHN LTD, DAVY AVENUE, KNOWLHILL, MILTON KEYNES, BUCKINGHAMSHIRE, MK5 8PH
Mole Valley District Council	/AJ5118	Eff.	LEATHERHEAD FOOD RESEARCH ASSOCIATION, RANDALLS ROAD, LEATHERHEAD, SURREY, KT22 7RY
	100796 /AP0267	Eff.	SMITHKLINE BEECHAM PHARMACEUTICALS PLC, BROCKHAM PARK, BETCHWORTH, SURREY, RH3 7AJ
New Forest	/AC2586	Eff.	ESSO PETROLEUM CO LTD, FAWLEY REFINERY, FAWLEY, SOUTHAMPTON, SO4 1TX
District Council	/AD2395	Eff.	FISCHER INSTRUMENTATION GB LIMITED, GORDLETON INDUSTRIAL PARK, PENNINGTON, LYMINGTON, HAMPSHIRE, SO41 8NX
	/AI1574	Eff.	ENICHEM ELASTOMERS LTD, CHARLESTON ROAD, HYTHE, SOUTHAMPTON, SO4 6ZA
	/AE0118	Rec.	LYMINGTON HOSPITAL, SOUTHAMPTON ROAD, LYMINGTON, HAMPSHIRE

Newbury District Council	/AC1628	Eff.	AGRICULTURAL AND FOOD RESEARCH COUNCIL, INSTITUTE FOR ANIMAL HEALTH, COMPTON LABORATORY, COMPTON, NEWBURY, BERKSHIRE, RG16 0NN
	/AC6018	Eff.	THE RIDGEWAY VETERINARY GROUP, 4 BAYDON ROAD, LAMBOURN, NEWBURY, BERKSHIRE, RG16 7NY
	/AH8344	Eff.	MOD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AH8514	Eff.	MOD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2554	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT-BURGHFIELD, THE MEARINGS, BURGHFIELD, READING, BERKSHIRE, RG3 3PR
	/AI2562	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT-BURGHFIELD, THE MEARINGS, BURGHFIELD, READING, BERKSHIRE, RG3 3PR
	/AI2589	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT-BURGHFIELD, THE MEARINGS, BURGHFIELD, READING, BERKSHIRE, RG3 3PR
	/AI2597	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT-BURGHFIELD, THE MEARINGS, BURGHFIELD, READING, BERKSHIRE, RG3 3PR
	/AI2619	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2627	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2635	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2643	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2651	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI2660	Eff.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
	/AI9036	Eff.	NE TECHNOLOGY LTD, BATH ROAD, BEENHAM, READING, BERKSHIRE, RG7 5PR
	/AJ3590	Eff.	CANBERRA PACKARD LTD, BROOK HOUSE, 14 STATION ROAD, PANGBOURNE, READING, BERKSHIRE, RG8 7DT
	/AO2841	Eff.	EUROTHERM GAUGING SYSTEMS LTD, ABEX ROAD, NEWBURY, BERKSHIRE, RG14 5EY
	/AO9960	Eff.	VALLEY EQUINE HOSPITAL, UPPER LAMBOURN ROAD, LAMBOURN, NEWBURY, BERKSHIRE, RG16 7QG
	100176 /AM9365	Eff.	O GORMAN SLATER AND MAIN, DONNINGTON GROVE, VETERINARY SURGERY, OXFORD ROAD, DONNINGTON, NEWBURY, BERKSHIRE, RG13 2JB
	/AO4500	Val.	HUNTING BRAE LTD, ATOMIC WEAPONS ESTABLISHMENT, ALDERMASTON, READING, BERKSHIRE, RG7 4PR
North Wiltshire District Council	/AM1852	Eff.	MOD, RNSA COPENACRE, HAWTHORN, CORSHAM, WILTSHIRE, SN13 0PW
Oxford City Council	/AD3154	Eff.	OXFORD REGIONAL BLOOD TRANSFUSION CENTRE, TISSUE TYPING AND PLATELET SEROLOGY LAB, JOHN RADCLIFFE HOSPITAL, HEADINGTON, OXFORD, OX3 9DU
	/AI3160	Eff.	OXFORD RADCLIFFE HOSPITAL NHS TRUST, JOHN RADCLIFFE HOSPITAL, HEADINGTON, OXFORD, OXFORDSHIRE, OX3 9DU
	/AI5693	Eff.	RADCLIFFE INFIRMARY NHS TRUST, RADCLIFFE INFIRMARY NHS TRUST HOSPITAL, WOODSTOCK ROAD, OXFORD, OXFORDSHIRE, OX2 6HE
	/AK9909	Eff.	UNIVERSITY OF OXFORD, UNIVERSITY OF OXFORD RESEARCH INSTITUTE, CHURCHILL HOSPITAL, HEADINGTON, OXFORD, OX3 7LJ
	/AK9925	Eff.	UNIVERSITY OF OXFORD, JOHN RADCLIFFE HOSPITAL, INSTITUTE OF MOLECULAR MEDICINE, HEADINGTON, OXFORD, OX3 9DU
	/AK9933	Eff.	UNIVERSITY OF OXFORD, NUFFIELD ORTHOPAEDIC CENTRE, WINDMILL ROAD, HEADINGTON, OXFORD, OX3 7LD
	/AN1742	Eff.	NUFFIELD ORTHOPAEDIC CENTRE NHS TRUST AND WELLCOME TRUST CENTRE FOR HUMAN GENETICS AND THE UNIVERSITY OF OXFORD, NUFFIELD ORTHOPAEDIC CENTRE, WINDMILL ROAD, HEADINGTON, OXFORD, OXFORDSHIRE, OX3 7LD
	/AP7156	Eff.	OXFORD BROOKES UNIVERSITY, GIPSY LANE, HEADINGTON, OXFORD, OXFORDSHIRE, OX3 0BP
	/AS1037	Eff.	THE OXFORD RADCLIFFE HOSPITAL NHS TRUST, THE CHURCHILL HOSPITAL, HEADINGTON, OXFORD, OX3 7LJ
	100153 /AM8113	Eff.	UNIVERSITY OF OXFORD, RADCLIFFE INFIRMARY, UNIVERSITY CLINICAL DEPARTMENTS, WOODSTOCK ROAD, OXFORD, OX2 6HE
	100154 /AM8121	Eff.	UNIVERSITY OF OXFORD, JOHN RADCLIFFE HOSPITAL, UNIVERSITY CLINICAL DEPARTMENTS, HEADINGTON, OXFORD, OX3 9DU
	101509 /AR6983	Eff.	OXFORD BIORESEARCH LABORATORY, MAGDALEN CENTRE, THE OXFORD SCIENCE PARK, OXFORD, OX4 4GA
	102053 /AR8994	Eff.	UNIVERSITY OF OXFORD, SAFETY OFFICE, 10 PARKS ROAD, OXFORD, OX1 3PD
	102060 /AP7059	Eff.	OXFORD INSTRUMENTS (UK) LIMITED, OSNEY MEAD, OXFORD, OXFORDSHIRE, OX2 0DX

Oxford (cont)	/AU9241	Val.	OXFORD RADCLIFFE HOSPITAL NHS TRUST, JOHN RADCLIFFE HOSPITAL, HEADLEY WAY, HEADINGTON, OXFORD, OX3 9DU
Poole Borough Council	/AE2218	Eff.	SIEMENS PLESSEY CONTROLS LTD, SOPERS LANE, POOLE, DORSET, BH17 7ER
	/AE2226	Eff.	SIEMENS PLESSEY CONTROLS LTD, SOPERS LANE, POOLE, DORSET, BH17 7ER
	100861 /AG1859	Eff.	SIGMA CHEMICAL COMPANY LTD, FANCY ROAD, POOLE, DORSET, BH17 7NH
	100861 /AQ1447	Eff.	SIGMA-ALDRICH CO LTD, FANCY ROAD, POOLE, DORSET, BH17 7NH
	100865 /AQ0742	Eff.	POOLE HOSPITAL NHS TRUST, LONGFLEET ROAD, POOLE, DORSET, BH15 2JB
Portsmouth City Council	/AD6820	Eff.	UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORP CORPORATION, PHYSICS DEPT, 1 KING HENRY 1 STREET, PORTSMOUTH, HAMPSHIRE, PO1 2BZ
	/AI1167	Eff.	PHOENIX NBCD SCHOOL, WHALE ISLAND, PORTSMOUTH
	/AU8288	Eff.	HER MAJESTY S NAVAL BASE, MAIN BUILDING, HM NAVAL BASE, PORTSMOUTH, PO1 3NM
	101648 /AQ9758	Eff.	PORTSMOUTH HOSPITALS NHS TRUST, QUEEN ALEXANDRA HOSPITAL, SOUTHWICK HILL ROAD, COSHAM, PORTSMOUTH, PO6 3LY
	101881 /AQ9740	Eff.	PORTSMOUTH HOSPITALS NHS TRUST, ST MARYS HOSPITAL, MILTON ROAD, PORTSMOUTH, PO3 6AD
Purbeck District Council	/AU1968	App.	UKAEA, WINFRITH POWER STATION, DORCHESTER, DORSET, DT2 8DH
	/AU8300	App.	UKAEA, WINFRITH POWER STATION, DORCHESTER, DORSET, DT2 8DH
	/AC3043	Eff.	SCHLUMBERGER INDUSTRIES, WYTCH FARM, FURZEBROOK ROAD, WAREHAM, DORSET, BH20 5JR
	100030 /AO4461	Eff.	NATURAL ENVIRONMENT RESEARCH COUNCIL, INSTITUTE OF TERRESTRIAL ECOLOGY, FURZEBROOK RESEARCH STATION, WAREHAM, DORSET, BH20 5AS
	100036 /AL6263	Eff.	BP EXPLORATION CO LTD, WELL 2B10, WELL SITE 2B, WYTCH FARM, WAREHAM, DORSET, BH20 5JR
	100511 /AM9306	Eff.	MINISTRY OF AGRICULTURE FISHERIES AND FOOD, FISH DISEASES LABORATORY, THE NOTHE, WEYMOUTH, DORSET, DT4 8UB
	100866 /AI4034	Eff.	TAYWOOD ENVIRONMENTAL CONSULTANCY, WASTE QUALITY CHECKING LABORATORY, BUILDING B32, WINFRITH TECHNOLOGY CENTRE, DORCHESTER, DORSET, DT2 8DH
	101632 /AR2929	Eff.	INSTITUTE OF FRESHWATER ECOLOGY, RIVER LABORATORY, EAST STOKE, WAREHAM, DORSET, BH20 6BB
	/AV6124	Rec.	DEFENCE RESEARCH AGENCY, DRA MARATIME DIVISION, HOLTON HEATH, POOLE, DORSET, BH16 6JU
Reading Borough Council	/AE4075	Eff.	READING UNIVERSITY, WHITEKNIGHTS, READING, BERKSHIRE, RG6 2AH
	/AJ6548	Eff.	B M BROWNE (UK) LTD, 9 COMMERCE PARK, BRUNEL ROAD, THEALE, READING, BERKSHIRE, RG7 4AB
	/AS4885	Eff.	ROYAL BERKSHIRE AND BATTLE HOSPITALS NHS TRUST, ROYAL BERKSHIRE HOSPITAL, LONDON ROAD, READING, BERKSHIRE, RG1 5AN
	/AS8490	Eff.	THAMES WATER UTILITIES LTD, SPENCER HOUSE, MANOR FARM ROAD, READING, BERKSHIRE, RG2 0JN
	101949 /AT0524	Eff.	FORENSIC SCIENCE SERVICE, MAIN BUILDING, ALDERMASTON, READING, BERKSHIRE, RG7 4PN
	/AU2697	Val.	B M BROWNE (UK) LTD, UNIT 2A PINCENTS KILN INDUSTRIAL PARK, PINCENTS LANE, CALCOT, READING, BERKSHIRE, RG31 7SP
Reigate And Banstead Borough Council	/AF3945	Eff.	PRIORY VETERINARY SURGERY, NORTH LODGE, 11 HIGH STREET, TADWORTH, SURREY, KT20 5SD
	/AJ6009	Eff.	EAST SURREY HOSPITAL AND COMMUNITY HEALTHCARE NHS TRUST, THE EAST SURREY HOSPITAL, THREE ARCH ROAD, REDHILL, SURREY, RH1 5RH
	100307 /AN7139	Eff.	PHILIPS RESEARCH LABORATORIES, CROSS OAK LANE, REDHILL, SURREY, RH1 5HA
	100797 /AP0259	Eff.	SMITHKLINE BEECHAM PHARMACEUTICALS PLC, SMITHKLINE BEECHAM BIOSCIENCES RESEARCH CENTRE, GREAT BURGH, YEWTREE BOTTOM ROAD, EPSOM, SURREY, KT18 5XQ
	100935 /AP7849	Eff.	PFIZER LTD, WALTON OAKS, DORKING ROAD, TADWORTH, SURREY, KT20 7NT
Runnymede Borough Council	/AC6034	Eff.	ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE, NEW COLLEGE, EGHAM, SURREY, TW20 0EX
	/AP9108	Eff.	CENTRAL VETERINARY LABORATORY, WOODHAM LANE, NEW HAW, ADDLESTONE, SURREY, KT15 3NB
	/AU0112	Eff.	BOTLEYS PARK AND ST PETERS HOSPITAL, DEPARTMENT OF NUCLEAR MEDICINE, GUILDFORD ROAD, CHERTSEY, SURREY, KT16 0QA
Rushmoor Borough Council	/AR1680	Eff.	ANAGEN (UK) PLC, 1 SPRINGS LAKE ESTATE, DEADBROOK LANE, ALDERSHOT, HAMPSHIRE, GU12 4UH

Salisbury District Council	/AI4557	Eff.	MOD, CBDE, PORTON DOWN, SALISBURY, SP4 0JQ
	/AI7378	Eff.	VETGEN EUROPE LTD, UNIT 6, CENTRE ,OLD SARUM PARK, LYSANDER WAY, OLD SARUM, SALISBURY, WILTSHIRE, SP4 6BU
	/AI8056	Eff.	MOD, CBDE, PORTON DOWN, SALISBURY, SP4 0JQ
	/AJ8206	Eff.	PUBLIC HEALTH LABORATORY SERVICE, CENTRE FOR APPLIED MICROBIOLOGY RESEARCH, PORTON DOWN, SALISBURY, WILTSHIRE, SP4 7DR
	/AM1682	Eff.	MOD, CBDE PORTON DOWN, PORTON DOWN, SALISBURY, WILTSHIRE, SP4 0JQ
	100469 /AO5956	Eff.	SALISBURY HEALTH CARE NHS TRUST, SALISBURY DISTRICT HOSPITAL, ODSTOCK, SALISBURY, SP2 8BJ
	/AI4549	Rec.	MOD, CBDE, PORTON DOWN, SALISBURY, SP4 0JQ
	/AI8129	Rec.	MOD, CBDE, PORTON DOWN, SALISBURY, SP4 0JQ
	/AL4104	Rec.	CHEMICAL AND BIOLOGICAL DEFENCE ESTABLISHMENT, PORTON DOWN, SALISBURY, SP4 0JQ
	/AV3281	Rec.	MOD, RNAD DEAN HILL, WEST DEAN, SALISBURY, WILTSHIRE, SP5 1EY
Slough Borough Council	/AC4031	Eff.	ICI PAINTS, ICI PAINTS, WEXHAM ROAD, SLOUGH, SL2 5DS
	/AC8410	Eff.	XENOVA LIMITED, 545 IPSWICH ROAD, SLOUGH, BERKSHIRE, SL1 4EQ
	/AE6558	Eff.	WEXHAM PARK HOSPITAL, WEXHAM PARK, SLOUGH, SL2 4HL
	/AF1152	Eff.	BAYER UK LTD, PHARMACEUTICAL BUSINESS GROUP, STOKE COURT, STOKE POGES, SLOUGH, BERKSHIRE, SL2 4LY
	/AJ8915	Eff.	ACAL AURIEMA LTD, 442 BATH ROAD, SLOUGH, BERKSHIRE, SL1 6BB
	/AR2597	Eff.	CELLTECH GROUP PLC, 216 BATH ROAD, SLOUGH, BERKSHIRE, SL1 4EN
	100187 /AM8091	Eff.	XENOVA LIMITED, 240 BATH ROAD, SLOUGH, BERKSHIRE, SL1 4EF
	/AN2587	Val.	HEATHERWOOD AND WEXHAM PARK HOSPITALS TRUST, WEXHAM PARK HOSPITAL, SLOUGH, SL2 4HL
South Buckingham-shire District Council	/AC6514	Eff.	SERVIER RESEARCH AND DEVELOPMENT LTD, FULMER HALL, WINDMILL ROAD, FULMER, SLOUGH, BERKSHIRE, SL3 6HH
	/AH9987	Eff.	S GRUNDON (WASTE) LTD, LAKESIDE ROAD, COLNBROOK, SLOUGH, SL3 0EG
	/AV1327	Val.	S GRUNDON (WASTE) LTD, LAKESIDE ROAD, COLNBROOK, SLOUGH, SL3 0EG
South Oxfordshire District Council	/AC4007	Eff.	HYDRAULICS RESEARCH LTD, HYDRAULICS RESEARCH LIMITED, WALLINGFORD, OXFORDSHIRE, OX10 8BA
	/AD6498	Eff.	BRITISH BIOTECHNOLOGY LTD, WATLINGTON ROAD, COWLEY, OXFORD, OX4 5LY
	/AE5039	Eff.	JET JOINT, MAIN BUILDING, ABINGDON, OXFORDSHIRE, OX14 3EA
	/AE5047	Eff.	JET JOINT, MAIN BUILDING, ABINGDON, OXFORDSHIRE, OX14 3EA
	/AI3712	Eff.	JOHNSON MATTHEY TECHNOLOGY CENTRE, BLOUNTS COURT, SONNING COMMON, READING, BERKSHIRE, RG4 9NY
	/AM3782	Eff.	ICN BIOMEDICALS LIMITED, UNIT 18, THAME PARK, WENMAN ROAD, THAME, OXFORDSHIRE, OX9 3XA
	/AO9285	Eff.	YAMANOUCHI UK LTD, YAMANOUCHI RESEARCH INSTITUTE, LITTLEMORE HOSPITAL, OXFORD, OX4 4XN
	/AS9984	Eff.	NATURAL ENVIRONMENT RESEARCH COUNCIL, INSTITUTE OF HYDROLOGY, CROWMARSH GIFFORD, WALLINGFORD, OXFORDSHIRE, OX10 8BB
	/AV2650	Eff.	SAFEGUARD INTERNATIONAL LTD, CULHAM, ABINGDON, OXFORD, OX11 ORA
	/AO2957	Val.	JET JOINT UNDERTAKING, ABINGDON, OXFORD, OXFORDSHIRE, OX14 3EA
	/AO9307	Val.	SAFEGUARD INTERNATIONAL LTD, NORTH CULHAM ESTATE, CULHAM, ABINGDON, OXFORD
	/AT9246	Val.	YAMANOUCHI UK LTD, YAMANOUCHI RESEARCH INSTITUTE, LITTLEMORE HOSPITAL, OXFORD, OX4 4XN
Southampton City Council	/AB1096	Eff.	SOUTHAMPTON GENERAL HOSPITAL, MEDICAL PHYSICS DEPARTMENT, TREMONA ROAD, SOUTHAMPTON, SO9 4XY
	/AC1814	Eff.	BRITISH AMERICAN TOBACCO CO LTD, REGENTS PARK ROAD, SOUTHAMPTON, SO15 8TL
	/AC7189	Eff.	UNIVERSITY OF SOUTHAMPTON, UNIVERSITY ROAD, SOUTHAMPTON, SO9 5NH
	/AD6455	Eff.	THE ROYAL SOUTH HANTS HOSPITAL, WESSEX RADIOTHERAPY CENTRE, BRINTONS TERRACE, SOUTHAMPTON, SO14 0YG
	101977 /AL5160	Eff.	RECHEM INTERNATIONAL LTD, CHARLESTON ROAD, HARDLEY, HYTHE, SOUTHAMPTON, SO45 3NX
	101998 /AR3062	Eff.	UNIVERSITY OF SOUTHAMPTON, SOUTHAMPTON OCEANOGRAPHY CENTRE, EMPRESS DOCK, EUROPEAN WAY, SOUTHAMPTON, SO14 3ZH
	/AR1493	Val.	CABLE AND WIRELESS (MARINE) LTD, BERTH 203 WESTERN DOCKS, SOUTHAMPTON, SO15 OHH

S'ton (cont)	/AV3559	Val.	SOUTHAMPTON UNIVERSITY HOSPITALS NHS TRUST, SOUTHAMPTON GENERAL AND PRINCESS ANNE HOSPITALS, TREMONA ROAD, SOUTHAMPTON, SO16 6YD
Spelthorne Borough Council	/AE8712	Eff.	BP INTERNATIONAL LTD, SUNBURY RESEARCH CENTRE, CHERTSEY ROAD, SUNBURY-ON-THAMES, MIDDLESEX, TW16 7LN
	100348 /AN8011	Eff.	BP INTERNATIONAL LTD, CHERTSEY ROAD, MIDDLESEX, LONDON, TW16 7LN
	100999 /AO4933	Eff.	ASHFORD HOSPITAL NHS TRUST, ASHFORD HOSPITAL, LONDON ROAD, ASHFORD, MIDDLESEX, TW15 3AA
Surrey Heath Borough Council	/AU3863	App.	LILLY RESEARCH CENTRE LTD, ERL WOOD MANOR, SUNNINGHILL ROAD, WINDLESHAM, SURREY, GU20 6PH
	/AJ5991	Eff.	FRIMLEY PARK HOSPITAL NHS TRUST, FRIMLEY PARK HOSPITAL, PORTSMOUTH ROAD, FRIMLEY, CAMBERLEY, SURREY, GU16 5UJ
Tandridge District Council	/AC1741	Eff.	BRF INTERNATIONAL, LYTTEL HALL, NUTFIELD, REDHILL, SURREY, RH1 4HY
	101249 /AR1388	Eff.	MARIE CURIE RESEARCH INSTITUTE, THE CHART, OXTED, SURREY, RH8 0TL
Test Valley Borough Council	/AV4164	Val.	FERRING RESEARCH INSTITUTE, 1 VENTURE ROAD, CHILWORTH RESEARCH CENTRE, SOUTHAMPTON, SO16 7NP
Thamesdown Borough Council	100657 /AU4592	Eff.	SWINDON AND MARLBOROUGH NHS TRUST, PRINCESS MARGARET HOSPITAL, MEDICAL PHYSICS, OKUS ROAD, SWINDON, WILTSHIRE, SN1 4JU
	101128 /AP2731	Eff.	HOECHST ROUSSEL LTD, KINGFISHER DRIVE, SWINDON, WILTSHIRE, SN3 5BZ
Vale Of White Horse District Council	/AC2462	Eff.	DOWELANCO LTD, LETCOMBE LABORATORY, LETCOMBE REGIS, WANTAGE, OXFORDSHIRE, OX12 9JT
	/AC4015	Eff.	ZENECA CELLMARK DIAGNOSTICS, UNIT 8, BLACKLANDS WAY, ABINGDON, OXFORDSHIRE, OX14 1DY
	/AC9491	Eff.	OXFORD INSTRUMENT IND ANALYSIS GROUP, 19 AND 20 NUFFIELD WAY, ABINGDON, OXFORDSHIRE, OX14 1TX
	/AD6510	Eff.	BRITISH BIOTECHNOLOGY LTD, LABORATORY PRODUCTS DIVISION, 4 /10 THE QUADRANT, ABINGDON, OXFORDSHIRE, OX14 3YS
	/AE3869	Eff.	NATIONAL RADIOLOGICAL PROTECTION BOARD, MAIN BUILDING, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0RQ
	/AJ1317	Eff.	SCIENCE AND ENGINEERING RESEARCH COUNCIL, RUTHERFORD APPLETON LABORATORY, CHILTERN, DIDCOT, OXFORDSHIRE, OX11 0QX
	/AL5763	Eff.	OXFORD GLYCOSYSTEMS LTD, UNITS 12 AND 14, BLACKLANDS WAY, ABINGDON, OXFORDSHIRE, OX14 1RG
	/AL8657	Eff.	BECTON DICKINSON (UK) LTD, BETWEEN TOWNS ROAD, COWLEY, OXFORD, OXFORDSHIRE, OX4 3LY
	/AN9573	Eff.	MRC RADIOBIOLOGY UNIT, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0RD
	/AO1535	Eff.	NATIONAL RADIOLOGICAL PROTECTION BOARD, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0RD
	/AR1337	Eff.	ESSO PETROLEUM COMPANY LTD, ESSO RESEARCH CENTRE, MILTON HILL, ABINGDON, OXFORDSHIRE, OX13 6AE
	100509 /AQ7577	Eff.	THE COUNCIL FOR THE CENTRAL LABORATORY OF THE RESEARCH COUNCILS, RUTHERFORD APPLETON LABORATORY, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0QX
	/AU2433	Rec.	JANSSEN CILAG LTD, JANSSEN CILAG PHARMACEUTICALS LTD, GROVE, WANTAGE, OXFORDSHIRE, OX12 0DQ
	/AV7945	Rec.	NATIONAL RADIOLOGICAL PROTECTION BOARD, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0RQ
	/AN2439	Val.	THE COUNCIL FOR THE CENTRAL LABORATORY OF THE RESEARCH COUNCILS, RUTHERFORD APPLETON LABORATORY, CHILTON, DIDCOT, OXFORDSHIRE, OX11 0QX
	/AN5004	Val.	UK ATOMIC ENERGY AUTHORITY, B462 /175 CULHAM HARWELL RADWASTE SERVICE, HARWELL LABORATORY, HARWELL, DIDCOT, OXFORDSHIRE, OX11 0RA
	/AU1003	Val.	AEA TECHNOLOGY PLC, HARWELL, DIDCOT, OXFORD, OX14 0RA
	/AU1011	Val.	AEA TECHNOLOGY PLC, HARWELL, DIDCOT, OXFORD, OX14 0RA
	/AU1020	Val.	AEA TECHNOLOGY PLC, HARWELL, DIDCOT, OXFORD, OX14 0RA
	/AU1038	Val.	AEA TECHNOLOGY PLC, HARWELL, DIDCOT, OXFORD, OX14 0RA
	/AU2158	Val.	AEA TECHNOLOGY PLC, HARWELL, DIDCOT, OXFORD, OX14 0RA
Waverley Borough Council	/AU2646	Val.	AIRGROUND EQUIPMENT SALES (UK) LTD, ROWAN HOUSE, GUILDFORD ROAD, FARNHAM, SURREY, GU9 9PZ
West Dorset District Council	101476 /AK3021	Eff.	UKAEA, WINFRITH, DORCHESTER, DORSET, DT2 8DH
	102130 /AB7698	Eff.	WEST DORSET GENERAL HOSPITALS NHS TRUST, DORSET COUNTY HOSPITAL, DORCHESTER, DORSET, DT1 1TS

W. Dorset (cont)	/AU1054	Val.	AEA TECHNOLOGY PLC, WINFRITH POWER STATION, DORCHESTER, DORSET, DT2 8DH
	/AU1062	Val.	AEA TECHNOLOGY PLC, WINFRITH POWER STATION, DORCHESTER, DORSET, DT2 8DH
	/AU1089	Val.	AEA TECHNOLOGY PLC, WINFRITH POWER STATION, DORCHESTER, DORSET, DT2 8DH
Woking Borough Council	/AL3442	Eff.	SERONO DIAGNOSTICS LTD, 20 /21 WOKING BUSINESS PARK, ALBERT DRIVE, WOKING, SURREY, GU21 5JY
Wokingham District Council	/AB2815	Eff.	P SCOTT DUNN VETERINARY PRACTICE, STRAIGHT MILE FARM, CARTERS HILL, BILLINGBEAR, WOKINGHAM, BERKSHIRE, RG40 5RP
	/AE1700	Eff.	AGRICULTURAL AND FOOD RESEARCH COUNCIL, INSTITUTE OF FOOD RESEARCH, EARLEY GATE, WHITEKNIGHT ROAD, READING, BERKSHIRE, RG6 6BZ
	100337 /AO4771	Val.	P SCOTT DUNN VETERINARY PRACTICE, STRAIGHT MILE FARM, CARTERS HILL, BILLINGBEAR, WOKINGHAM, BERKSHIRE, RG11 5RW
Wycombe District Council	/AD2999	Eff.	WRC PLC, HENLEY ROAD, MEDMENHAM, MARLOW, BUCKINGHAMSHIRE, SL7 2HD
	/AT0087	Eff.	SOUTH BUCKINGHAMSHIRE NHS TRUST SOUTH BUCKINGHAMSHIRE NHS TRUST, WYCOMBE GENERAL HOSPIAL, QUEEN ALEXANDRA ROAD, HIGH WYCOMBE, HP11 2TT
	100180 /AN4741	Eff.	OXFORD INSTRUMENTS, ANALYTICAL SYSTEMS DIVISION, HALIFAX ROAD, CRESSEX INDUSTRIAL ESTATE, HIGH WYCOMBE, BUCKINGHAMSHIRE, HP12 3SE
	100257 /AN6370	Val.	WRC PLC, HENLEY ROAD, MEDMENHAM ROAD, MARLOW, BUCKINGHAMSHIRE, SL7 2HD