

# eCHO

THE NEWSLETTER OF THE CULHAM SCIENCE CENTRE & HARWELL BUSINESS CENTRE

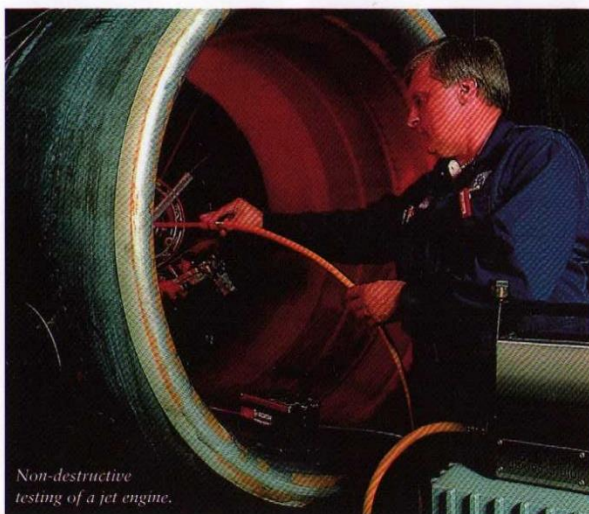
APRIL 1998

## QSA business acquired

**A**EA Technology has added a further specialist arm with the purchase of the industrial quality and safety assurance (QSA) business of Nycomed Amersham plc for £16.5m.

Formerly known as Amersham International, the QSA business recorded sales of over £38m for the year ending 31 March 1997 with profits of nearly £4m. Its principal activities include products, services and radioactive sources for non-destructive testing in the oil, aircraft and engineering industries, also static control, calibration and environmental services for customers worldwide.

In June last year Nycomed announced that it was seeking a partner to take its QSA business forward. AEA Technology recognised that the division would complement its own



Non-destructive testing of a jet engine.

nuclear science operations where there is potential to grow.

Manufacturing plant and operations in the UK will be transferred from Amersham Laboratories to AEAT's

Harwell premises over the next four years. QSA employs 300 people based at Amersham, Braunschweig in Germany, three North American locations and at Shenzhen in China.

## Harwell energised!

**A** pharmaceutical company has taken occupation of building A147, marking this year's first significant letting at Harwell International Business Centre.

Energiser plc moved into the 2,500 sq ft premises near the Cockcroft Hall in early March. The company was previously located at Pangbourne and employs some six staff. It specialises in treatments for cancer and asthma using natural ingredients.

"Harwell offers us ideal facilities for our present needs and also gives us the opportunity to expand due to its extensive development plans and space," comments professor David

Young of Energiser plc. "Added to this we will be surrounded by an established network of companies working in the fields of science and technology.

Energiser plc organises seminars and conferences relating to cancer research and the facilities at Harwell will allow many of these to take place on site.

Looking ahead to further progress, UKAEA commercial manager, Ian Rodham, said, "We are presently bring forward

## Energiser



Prof David Young (left) accepts the keys from UKAEA's Simon Ramsell.

plans with private developers for 300,000sq ft of new space with planning consent and have a healthy number of enquiries about the rest of the available space to let."

### This Month

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# UK attracts US innovation



Dick Cooper (left), Ceravision MD, and director Tim Reynolds with one of the ceramic tiles.

**A** dynamic hi-tech company formerly based in Silicon Valley, USA, has been persuaded to return to Britain due to a new collaboration with CLRC Rutherford Appleton Laboratory.

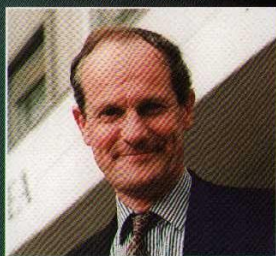
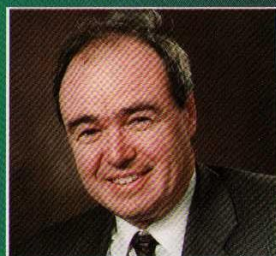
Ceravision has signed a three-year contract to operate from the Chilton site and will have access to the central microstructure facility (CMF) clean rooms and state-of-the-art equipment to help develop its prototype products. In the run up to the millennium the company aims to develop and license affordable, flat panel display screens by butting together four-inch ceramic tiles with a 'seamless' joint.

As part of the agreement CLRC has taken a stakeholding in Ceravision. "We are happy to

work in partnership with young technology companies. By combining our world-class expertise and facilities with their business ideas we can provide a springboard for them into fast-moving global markets", explains Dr Allyson Reed, CLRC's commercial director.

Ceravision MD, Dick Cooper, comments, "I left Britain in 1982 because there were few opportunities for young, innovative companies to prosper. This deal with CLRC represents a new commitment by the government to help industry."

## New heads of site



As many ECHO readers will be aware, two new heads of site have been appointed by UKAEA. John Wilkins (pictured left) at Harwell and Derek Robinson at Culham. ECHO will report on other strategic changes in forthcoming issues.

## Obituaries

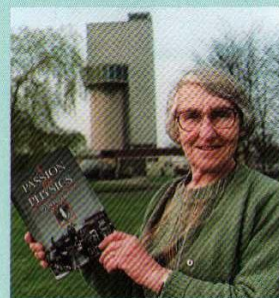
### Dr Joan Freeman 1918-98

**E**x-Harwell scientist, Dr Joan Freeman, died at the Radcliffe Infirmary, Oxford, aged 80, after a short illness.

Following her childhood in Perth, Australia, her unique career began in the wartime radar establishment in Sydney after which she emigrated to Britain, obtaining a PhD in nuclear physics at the Cavendish Laboratory in Cambridge. There she met Dr John Jelley, married him and pursued an illustrious career at Harwell.

She joined the Van de Graaff Group in 1951 and became the leader of the Tandem Generator Group in 1960 winning an international reputation for her work in fundamental nuclear physics. She published over 100 scientific papers and was in much demand as a lecturer in America, Europe and her home country of Australia.

Joan was made a Fellow of the Institute of Physics and a Fellow of the American Physical Society, and in 1976 was awarded jointly with Prof RJ Blin-Stoyle, the Rutherford Medal of the Institute of Physics. She was the first woman to



Joan Freeman, pictured with her book, outside the Tandem Generator at Harwell in 1991.

receive this honour. She retired from Harwell in 1983.

In 1991 she published her autobiography, "A Passion for Physics" (pub. Adam Hilgar) in which she described the struggle she had as a young woman to obtain higher education in physics, paving the way for later generations of women scientists. In 1993 she was given an Honorary Doctorate at Sydney University.

She and John continued their love of physics, in retirement at their home in Abingdon until his death in 1997. Her other interests included sailing, walking, bird watching and painting.

### George Carter

George Carter, 80, died earlier this year, having worked for the authority for 25 years, retiring in 1982. His early years were spent in Cheshire, but he joined UKAEA Capenhurst in 1957 as an electrician, transferring to Harwell in 1962 as a skilled craftsman. In the following year he joined the site services division in Culham. George was a well-known member of the local community, playing the organ in his local church of St Birinus in Dorchester. He had



been a pianist all his life and was a member of the 'Three of Clubs' jazz trio. He and his wife Veronica have two children, and five grandchildren.

### Colin Ashmore

After a short illness, Colin Ashmore (46), died on 27 February. Colin had worked at Harwell for 27 years as a research chemist. His many friends and colleagues will miss him greatly. They will

remember his sense of humour and his contribution as a reliable and dedicated colleague whose quality of work was widely respected. Donations in Colin's memory should be made to the RNLI.

# Study reveals Oxford pollution

**AEA Technology's Aerosol Science Centre is working with Oxford City Council to measure traffic pollution in the heart of the city.**

Following a study carried out in March and April last year, AEAT has conducted a further

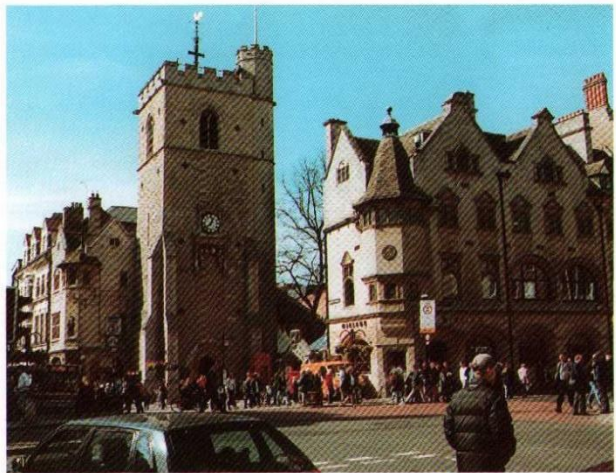


Dr David Booker who recently received the Oliver Lucas Automotive Engineering Award at the Autotech Congress for his paper about vehicle emissions.

trial by installing sensitive monitoring equipment at Carfax in Oxford, at the busy junction of High Street, St Aldates, Cornmarket and Queen Street.

The studies combine information on weather, traffic types and volume with levels of pollutants in the atmosphere such as carbon monoxide, nitrogen dioxide and particle measurement. The equipment is able to detect ultra-fine particles which have not been routinely measured to date and are thought to contribute to pulmonary and respiratory problems.

The findings will be used as part of the city and county council's Oxford Transport Strategy, which is exploring options to pedestrianise Cornmarket and Broad Street and keeping cars out of High Street.



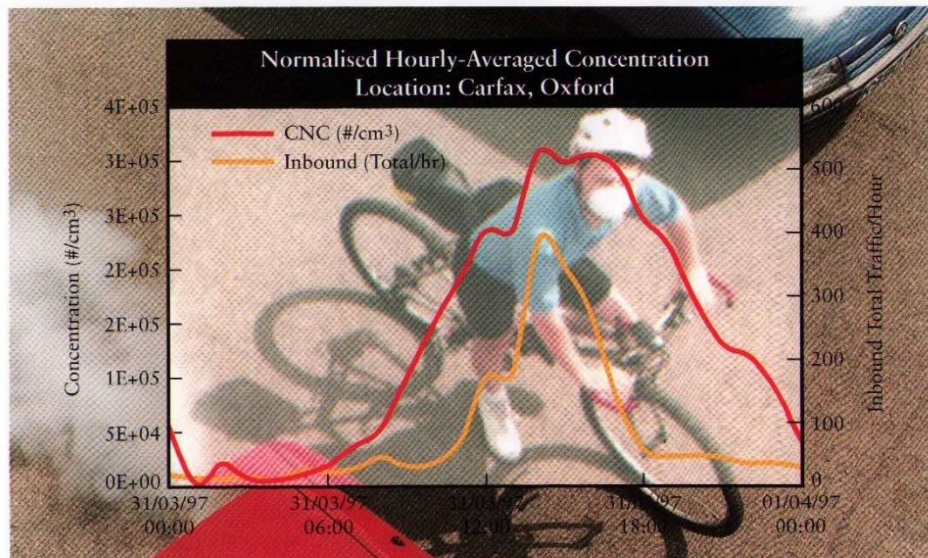
Carfax, the survey site, where Oxford's main streets converge.

"This is an important piece of research and typifies the type of work which is becoming more common for local authorities up and down the country," says

manager David Booker. "There is acute public pressure on government bodies to formulate new legislation and give reassurance to allay current health concerns. Our air management monitoring package may in the future be coupled with the Groundhog equipment to identify pollution hotspots."

David Booker and colleague Keith Earnshaw have written an article based on the Oxford study for 'Atmospheric Environment Journal', a specialist scientific journal.

The Aerosol Science Centre is working closely with the automotive industry and fuel suppliers to reduce overall emission levels in the future. AEAT also compiles the government's National Atmospheric Emissions Inventory (NAEI) and is now offering the same techniques to help large organisations assess, and reduce, the emissions from company vehicle fleets.



This graph illustrates the typical daily inbound traffic volumes at Carfax (red line) and corresponding particulate levels (yellow).

## Microsystems Technology for AEAT

**MST2000 is a new consortium involving AEA Technology and other organisations that have expertise in Microsystems Technology - miniaturisation involving components with micron size detail.**



Japan and the USA have adopted this technology but European industry has been slow to realise its benefits. In response, the EU is encouraging the formation of groups to help promote the uptake of MST in Europe.

At present MST is mostly used for transducers, however, over the next few years, micro-engineered components like sensors, actuators and miniature structures will find applications in almost every sector of the manufacturing industry, especially in the medical, aerospace, automotive, consumer and process industries.

"MST2000 can help businesses exploit this technology and gain competitive advantage," says AEAT project co-ordinator, Ruth Harper. "We offer advice and support from the initial conception of a product through to manufacture and packaging. Each customer that comes to us may receive a free feasibility study and project proposal".

# Government launches environment plan

Just a fortnight after visiting AEA Technology, John Battle, minister for science, energy and industry, hosted a conference in London to launch the first ever business plan for the UK environment industries. AEA Technology chairman, Sir Anthony Cleaver also spoke to the 250 delegates, presenting industry's response to this important new initiative.

The plan, produced by the government's Joint Environmental Markets Unit (JEMU), sets out a three-year action plan showing how JEMU will work with the nation's green industries to improve their performance and increase the UK's share of fast-growing global markets.

The aim is to form a part-

nership between government and industry with the common purpose of improving the environment and competing with success in the world marketplace. For example, AEA Technology has been leading the fight against air pollution in China, Thailand and Hungary with air quality management projects.

Another VIP who learnt about the many facets of AEA Technology was local Oxford West and Abingdon MP, Dr Evan Harris. He spent time at both Culham and Harwell sites with director of corporate affairs, Andrew McCree. Dr Harris, who is Liberal Democrat health spokesman, was particularly interested in the clinical trials centre where AEA Technology is helping to develop new medicines.



John Battle (centre) learns about AEA Technology's lithium-ion batteries from Rob Neat (left) and Dr Peter Watson during his visit last month.

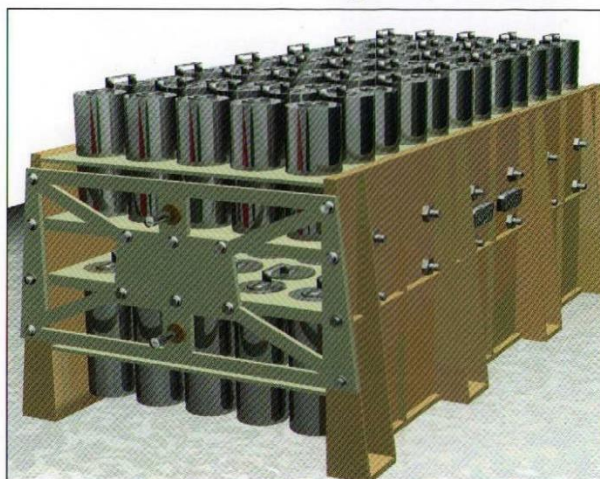
# Satellites run on Li-ion power

Satellites of the future could incorporate lithium-ion (li-ion) batteries of a kind developed and patented by AEA Technology. Solar power is used when a spacecraft is in view of the sun, but batteries are needed to travel into Earth's shadow. Lithium-ion batteries are more than twice as powerful per kilo as existing satellite technology.

AEA Technology and the British National Space Centre are jointly developing several lithium-ion battery module designs for use in space with advice from Matra Marconi Space, the leading European satellite manufacturer. As part of this programme, the Defence Evaluation and Research Agency has asked AEA Technology to supply lithium-ion batteries for its Science and Technology

Research Vehicle satellite to be launched next year.

Having worked on lithium-ion technology since the early 1970s, AEA Technology holds key patents and provides licences to Sony and Matsushita, which sells under the Panasonic name. AEA Technology is confident that the batteries will be an important and reliable power source for tomorrow's satellites as they transmit mobile phone and television signals to Earth.



AEA Technology is designing lithium-ion battery modules to power spacebound vehicles.

# Windows see through technology



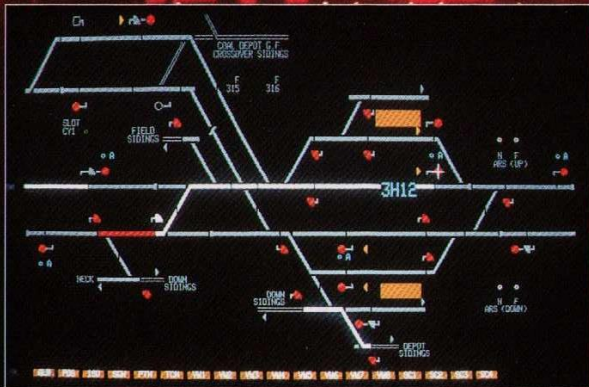
The new Tremcards package can produce versions in up to 24 languages, as they must be in the language of every country through which the load is travelling.

The National Chemical Emergency Centre (NCEC) has launched Windows versions of two of its most successful products, Tremcards and Chemdata.

Based at Culham, the AEA Technology subsidiary has updated the software packages, making them even easier to use. Chemdata is principally used by fire brigades, ports, airports and industry for information at the site of a chemical accident. It now has over 90,000 chemical names and provides extensive details such as appropriate fire fighting measures, first aid, protective clothing and decontamination procedures.

Tremcards are used by those transporting chemicals across Europe and, to comply with legislation, give details of chemicals in transit and what action is required should an accident occur. The DOS version has already been approved by the European Chemical Industry Council (CEFIC).

# Keeping railways safe



Signallers use displays to track train positions (in red) along set routes.

**T**he current method of locating the position of trains is set to be replaced by a new system being developed by AEA Technology and GEC Alstom Signalling Ltd.

To date, 'track circuits' have been used. They measure the reduction in electrical resistance between the rails when a train passes, but are expensive to install and maintain and are subject to rust and flooding.

A £795,000 contract has been signed between AEAT

and GEC Alstom to develop software that will link 'axle counters' to SSI (solid state interlocking), a computer-based safety system at the heart of modern railway signalling. Axle counters are fitted at the start and end of railway sections and simply count the number of wheels passing over at both points to judge whether the track is clear. The addition of SSI will be particularly useful where the railway is seldom used or where track sections are long.

## Virgin invests in tilting trains



"They'll meet the highest international standards and there's nothing to match them in this country" says project manager, Allan Carter.

**A**EA Technology has been providing technical support to Virgin as it invests £1.85bn in a fleet of new tilting trains which will be the most modern in Britain.

Destined for the West Coast main line and Cross Country routes, the tilting trains will offer

the highest standards of passenger comfort, being able to travel faster around curves at a slight angle. AEAT's science and engineering business has been assessing many factors including the degree of smoothness, noise levels, air conditioning and meeting the timetable.

### Branson gives live broadcast

Hundreds of local business people visited Culham to watch a live screening of the 1998 UK Innovation Lecture and to hear a presentation by Virgin chairman, Richard Branson. AEA Technology and the Heart of England TEC sponsored the live link on 31 March. It was one of 40 such links to the lecture in London which centred on innovation in management and was government endorsed. Afterwards a panel discussion, chaired by AEAT chief executive, Peter Watson, and including TEC chief executive, Barrie Giles, discussed how innovation can help local businesses.

## eCHOBRIEF

### Updated doses

NRPB has published Revised Generalised Derived Limits (GDL) for radioisotopes of strontium, ruthenium, iodine, caesium, plutonium, americium, and curium, together with advice on their application. The GDLs are based on an effective dose of one millisievert a year, the annual dose limit for the public as recommended by NRPB. The document should assist those who undertake monitoring programmes or who assess the results i.e. regulatory bodies, government agencies and local authorities. Copies can be bought direct from NRPB information office or ordered through the stationery office.

### Artificial hip testing

Around 40,000 artificial hips are fitted annually but they can fail due to fatigue and wear. After June 1998 all orthopaedic implants will have to meet tough new European safety standards under the Medical Devices Directive (MDD). AEAT offers an independent service for testing artificial hips, knee and shoulder implants, to ensure they are safe for patients.

### New Regulations

At the end of February the Health and Safety Commission (HSC) published proposals to revise the Ionising Radiations Regulations 1985 (IRR85). Revision is necessary to incorporate changes in an EU directive - to be implemented by May 2000 - concerning the protection of workers and the public against ionising radiation. Single copies of the proposals are available free from HSE Books on 01787 881165. The full text can be viewed at the HSE web site: [www.open.gov.uk/hse/condocs/](http://www.open.gov.uk/hse/condocs/)

### Enigma V adds three

Enigma V has added three more Elsevier Scientific titles to its portfolio. 'Reinforced Plastics' aimed at everyone who uses or manufactures GRP and composites. This includes such industry sectors as boat building, the aircraft industry, car manufacture and building. 'III-Vs' covers the semiconductor industry world-wide including such areas as optoelectronics, blue lasers and heterostructures. Enigma V is also now producing the company newsletter for Circular Distributors Ltd, the largest doorstep distribution company in the UK, and 'Separation & Filtration' magazine.

# Tokyo visitor has local liaison

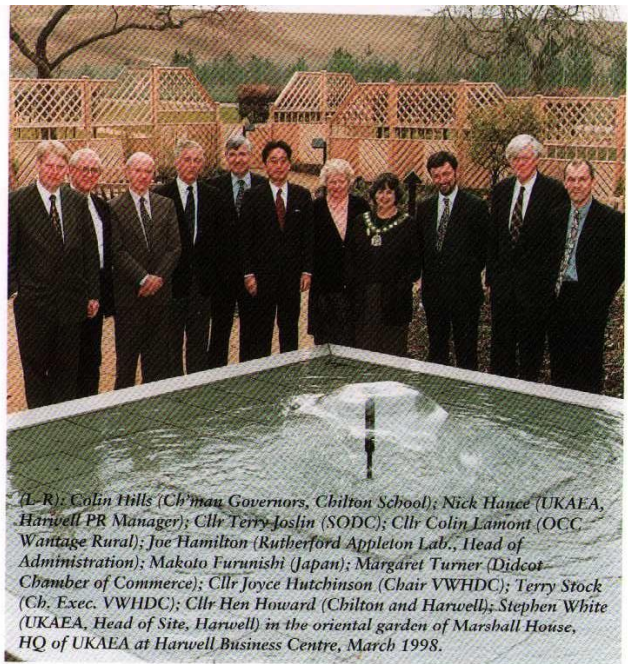
**M**embers of Harwell's Local Liaison Committee (LLC) were called in to advise Makoto Furunishi on local community relations with a licensed nuclear site. He spent a day as the guest of UKAEA's corporate communications department and had a working lunch with local councillors, officials and interest groups.

Mr Furunishi is the deputy director of Japan's Science & Technology Agency and is on a secondment fellowship with the DTI from the Prime Minister's Office, Tokyo. His fellowship involves touring UK nuclear sites - he visits Dounreay in April - to learn how LLCs operate in the UK. His findings will be used to improve community liaison in Japan.

Andy Munn, UKAEA media

affairs manager, gave a presentation on the UK nuclear debate and Nick Hance, Harwell's local liaison secretary, explained how the committee came into being. The Japanese visitor met eight LLC members including Cllr Joyce Hutchinson, chairman of Vale of White Horse District Council, and discussed current issues.

Stephen White, head of site, explained how it was important



(L-R): Colin Hills (Chairman, Governors, Chilton School); Nick Hance (UKAEA, Harwell PR Manager); Cllr Terry Joslin (SODC); Cllr Colin Lamont (OCC Wantage Rural); Joe Hamilton (Rutherford Appleton Lab., Head of Administration); Makoto Furunishi (Japan); Margaret Turner (Didcot Chamber of Commerce); Cllr Joyce Hutchinson (Chair VWHDC); Terry Stock (Ch. Exec. VWHDC); Cllr Hen Howard (Chilton and Harwell); Stephen White (UKAEA, Head of Site, Harwell) in the oriental garden of Marshall House, HQ of UKAEA at Harwell Business Centre, March 1998.

to inform the local community at a time when Harwell was changing into an international business centre. After posing for

a photograph in the oriental style garden at the rear of the Marshall Building, Mr Furunishi was given a tour of Harwell.



Stuart Clark (second right) of UKAEA, with FRA members who will put the vehicle to good use.

## Fire engine enroute to Beirut

**A** redundant fire appliance will find new surroundings in mainland Europe, following its donation by UKAEA to the Fireman's Relief Aid (FRA).

The Bedford fire engine was added to the UKAEA fleet at Culham in 1988 after serving with the Oxfordshire County Fire Brigade since August 1976. It will be re-equipped by the FRA for civilian fire fighting

duties and has already been exported to Beirut.

The FRA is a charitable organisation, primarily made up of current and ex-fire personnel, which provides humanitarian aid and relief to areas of need throughout Europe and North Africa.

The donation follows a previous gift to the FRA of breathing apparatus, which was

sent to Sarajevo (see ECHO July 1997), where the Bosnian war has put extreme pressure on the civil emergency services. The BA equipment was put to use within hours of delivery to the Sarajevo Fire Service, saving two lives including a fireman overcome by fumes from a burning building.

For more information about the work of the FRA, please call 01268 694068.

## Fusion on display



Later the same week UKAEA Fusion hosted a day and evening event for industrialists. Local county councillor, David Buckle (right) is seen here with Dr Frank Briscoe, opening the Fusion EXPO.

**A**s part of the national science engineering and technology week (SET98), UKAEA Fusion once again opened its doors to the general public and was delighted to welcome over 200 visitors. PR manager, Chris Carpenter, was pleased to note that the majority of visitors were non-scientists who were not familiar with the work carried out at Culham and represented a fresh audience.

Visitors saw the European Fusion Programme exhibition which will tour Britain as part of the UK's presidency of the European Union. There were visits to the COMPASS and world famous START experiments and hands-on experiments including high speed video and liquid nitrogen displays. Their comments included:

*"thoroughly intriguing and very exciting. Good fun - very friendly presenters and very clever as well. Well done, when can I come again?"* R Wigzell, age 12.

*"very helpful staff, learnt a lot, we had an interesting tour of COMPASS, experiments were fun"* R Hancock.

*"a truly worthwhile visit. Staff gave a first-rate friendly explanation to all the experiments on the tour. Please have another Open Day"* W Marks.

*"very impressive and informative, we would be most interested in any future opportunities to see other parts of the site"* J K McMahon.

# Computer helps CAB pilot take off



Paper files transfer to disk. Gerry Bowen-Thomas, chairman of the management committee and 'Friends' group, with CAB managers, Diane Armstrong (left) and Doreen Kinsler.

**A** redundant computer has been donated by UKAEA to the Abingdon & District Citizens Advice Bureau and has helped the branch achieve selection for a national pilot scheme.

Abingdon CAB is one of fifty - out of the total 750 UK branches - to test and evaluate the new 'Electronic Information System' on computer prior to its nationwide launch later this year.

To date, CAB advisers at Abingdon have used a 68,000-sheet paper-based reference system, supported by a mini library of reference books. The new technology will allow the entire information system to be

contained on a CD-ROM. The national association felt Abingdon CAB would be a suitable 'guinea pig', but a computer was required.

UKAEA has been an active supporter of the bureau since the formation of the 'Friends of Abingdon CAB' five years ago. Together with other sponsors like Nirex and NRPB, a total of £10,000 has been raised by the 'Friends' in that time.

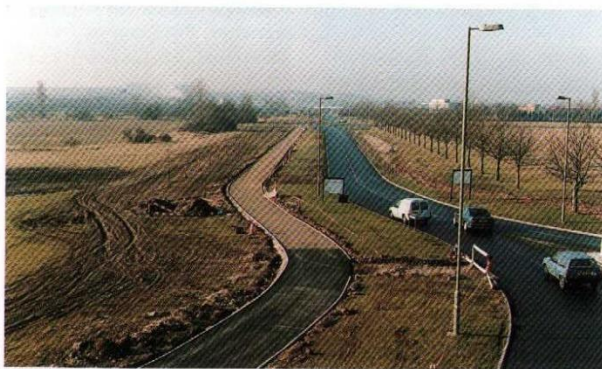
UKAEA has also recently donated surplus computers to the East Hendred Trust, Youth Works (an Oxford charity working with deprived youngsters), Caldecott Primary School, Burnham Grammar School, Milton School and Corsham Scouts.

# Promoting green journeys

**J**ourneys by foot and on bicycle around the Harwell site will be made easier following the construction of 1,550m of footpaths and cycleways.

After the decommissioning of the old steam ducts, work was carried out to improve footpaths. Further provision is now being made for cyclists with routes along Fermi Avenue, the new spine road and Dido Road. In addition, the old Library Avenue is being used as a temporary cycleway until the start of phase one development work.

The established horse chestnuts along the northern side of Fermi Avenue have now been complemented by new tree planting on the south side. Ian



Construction work is now mostly complete. The principal contractor was Gordon Hill & Sons with trees procured and planted by JCL.

Rodham, UKAEA's manager for the project, comments, "We have taken the opportunity to complete avenue planting of

this important access road and we hope that staff who use Fermi Avenue will enjoy the improvements."

# Last Harwell Charity Ball

**T**he ninth and last Harwell Charity Ball was enjoyed by over 350 guests, raising over £3,500 for local charities and bringing the total tally to an amazing £23,000.

The star raffle prize was a trip to Costa Blanca, donated by brothers Michael and Tony Hrycko building contractors of Didcot. The winning ticket belonged to Tony Hrycko who generously offered the holiday for auction to raise still more funds.

Tribute was paid to organisers, Janette Boram, Susan Bowman, Paula Manfredi and Grahame Murphy, whose dedication and hard work ensured a highly successful event. Thanks were also extended to sponsors UKAEA, AEA Technology, RGIT and all the local companies and individuals who donated raffle prizes.

Funds will be shared by five charities: Didcot Hospital, the Walter Lampard Animal Trust, Wantage Trust for Adults, Abingdon Friends Cancer Care and Albert Honey Animal Rescue in Stevenon.



Grahame Murphy also auctioned this beautifully decorated cake provided by the Walter Lampard Animal Trust, raising £55.



A tremendous achievement for Marion Jones (left) as she crosses the finish line.

**A**s thousands of runners prepare for the London Marathon later this month, Marion Jones, nursery assistant at Harwell's Kids Unlimited crèche, deserves to put her feet up.

She competed in the New York Marathon in November last year and has so far managed to raise £3,700 for Whizz Kids, a charity providing mobility aids for disabled children. Maz, who had not run a marathon before, spent 15 weeks in gruelling preparation, training around the site and swimming before a busy day looking after her toddler group at the nursery. Clocking up a very respectable time of 5 hours, 33 minutes, 31 seconds, Maz endured a torrential thunderstorm during the 26-mile route.

Not content with her endeavours, she also raised funds with a sponsored pram push, cake stalls, face-painting, race night, Halloween Disco and Chocoholics Raffle. In addition to support from nursery staff, parents and children, she would like to thank sponsors including UKAEA and the White Hart pub in Harwell village.

# WANTED – Books and spares for VSO venture

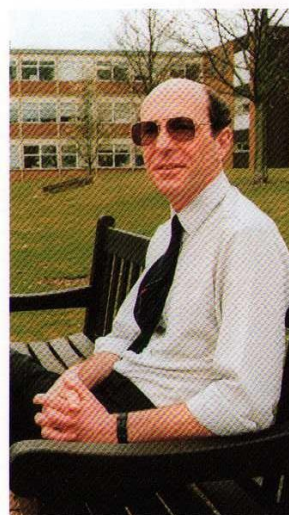
In June of this year Alan Wood, who has worked in RAL's space science department for eight years, will be giving up home comforts to take up a VSO (voluntary service overseas) placement in Nigeria.

As a computer lecturer at the Federal Polytechnic in Damarturu he will be teaching a wide range of courses at our 'A' level first year undergraduate standard.

Alan has made a plea for staff at Culham or Harwell to donate any relevant books which might be gathering dust on shelves. The polytechnic has several 386 pc's with 4Mb RAM and 80Mb hard disks with Epson 24 pin dot matrix printers. As he will have to maintain these machines he would appreciate any spare parts. Finally, he is looking for a reasonably priced laptop computer notebook.

"To give some idea of conditions, I will be paid the local rate for a computer lecturer - less than fifty pounds a month," says Alan. "Despite all the discomforts, this is a personal goal I've had for many years and I feel with my level of experience and motivation, now is the time to take the challenge."

Staff can contact Alan for more information about the courses he will be taking, on R6420 or a.wood@rl.ac.uk



Alan Wood heading for a VSO post in Nigeria.

## Teachers help Open Day plans

Four Oxfordshire teachers spent a day at CLRC Rutherford Appleton Laboratory to help choose experiments for school pupils to carry out during the Open Days in late June.



RAL school liaison officer, Rachel Baines (right) with teachers John Prendergast of Wallingford School and (from top) Sharon Smith, St Nicholas CE Primary, Ruth Parry of Didcot Girls and Christine Foord, Stephen Freeman County Primary, Didcot, with a model of satellite orbits.

"It's important that we liaise closely with teachers to select experiments that will not only be fun for the pupils to do, but will also link into the National Curriculum", commented Rachel Baines, RAL school liaison officer. She was particularly pleased that two primary schools were represented. "We would like to target the young pupils more, but realise that we need help to present our world leading scientific research at a level that will interest and excite them", she said.

The teachers spent a fruitful day speaking to scientists and engineers in a number of areas including space science, where instruments are built and tested prior to space launch. In computing they discussed the creation of Web pages and in the science division the group saw where high power lasers and neutrons are used to investigate the atomic and molecular structure of materials.

CLRC RAL Open Days will run from Friday 26 June to Wednesday 1 July. See the May and June issues of ECHO for more details.

## Giving blood

The next blood donor clinics will be held on Tuesday 21, Wednesday 22 and Thursday 23 April. Please note that sessions will be held upstairs in the Harwell Social Club. They will run from 10.30am-12.45pm and 2.30pm-4.45pm. As always, everyone is welcome, whether or not you have attended before.

## We're banking on Paul

Celebrating 25 years' service with Lloyds Bank is branch manager Paul Whatley who joined the Curie Avenue branch in 1997. Previously a manager at one of the Oxford branches, Paul comes from the Reading area and now lives in Abingdon with his wife, Karen, who also works for the bank.

As well as managing the branch - the only bank on the Harwell site - Paul deals with lending requests, including Cheltenham & Gloucester mortgages, personal loans and



Harwell branch manager, Paul Whatley.

other areas of customer service.

"My seven other colleagues at the bank specialise in particular areas" says Paul. "Jayne Tidmus is a mortgage arranger, Caroline Barnes, our customer account manager, can advise on personal finance and Pat Belcher is responsible for foreign services. In addition, Matthew Hicks is a financial adviser representing Lloyds Bank marketing group products. We would, of course, be delighted to discuss all your banking needs whether or not you are an existing Lloyds customer."

## Great support to give up

Linda Haynes of UKAEA Finance has triumphed where many others have failed. Since her birthday last year in July she has managed to give up smoking, having been on 20 a day for about 30 years. Her achievement has been sponsored by workmates and Linda has raised £150 for the special care baby unit at the John Radcliffe hospital as a result.

"My husband Fred gave up cigars and I didn't want to smoke if he wasn't," recalls Linda. She visited RGIT, the occupational health division, and received free nicotine patches and invaluable weekly counselling from expert, Vicky Rose.



Linda (left) has been supported in her efforts by colleagues like Nicky Sanford.

Although she still faces temptation, particularly when socialising, Linda will not let down the colleagues who have been so supportive. "I do tend to nibble since giving up. If only there were patches to lose weight!" she says.



# Israeli experience

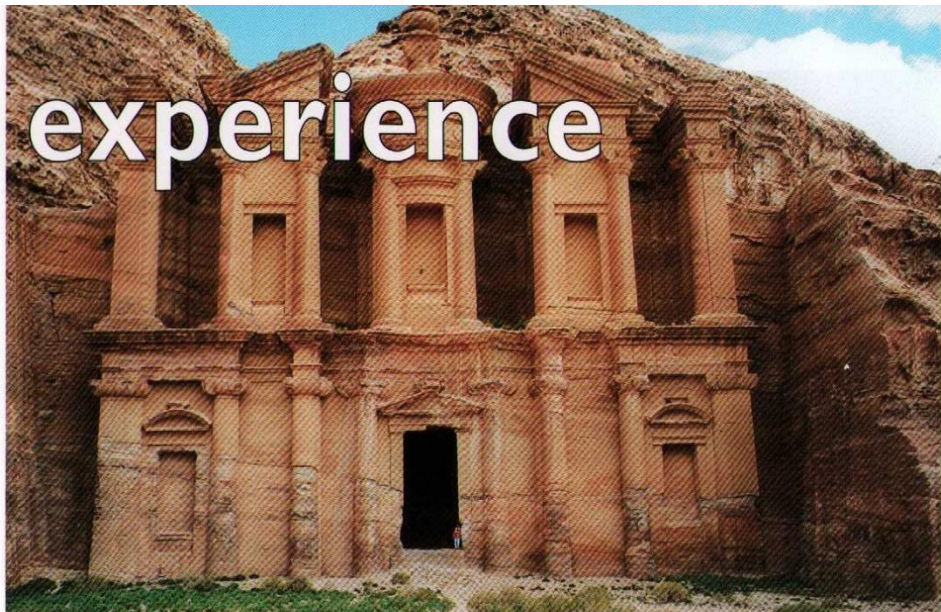
**T**wo dozen residents of Harwell and Chilton, including some past and present members of Culham, Harwell, and NRPB staff, visited the Holy Land in February.

Undeterred by threats of war and the highly visible signs of military activity, the pilgrims spent nine absorbing days in Israel and Jordan. Their itinerary included Jerusalem, Qumran, the Dead Sea, Jericho and Galilee. As well as seeing traditional holy places - such as Bethlehem, Nazareth and Capernaum - there were opportunities to explore some pre-Christian sites.

"Staying at the Lot Hotel, 1300 feet below sea level, near to Sodom, with the whiff of sulphur in the air was a unique experience, as was visiting Masada and the lost city of Petra", said Nick Hance, Harwell's PR manager.

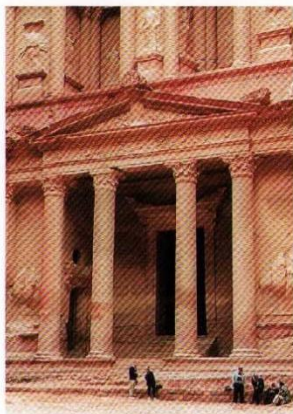
He went on, "Petra was an amazing place with its gigantic buildings carved out of pink sandstone. The sonic booms of Jordanian airforce jets all added to the sombre mood of the 3000 year-old city."

The tensions of crossing the Allenby Bridge, with its six checkpoints, contrasted with the tranquillity of the Sea of Galilee. Vivid red 'lilies of the field' grew in profusion among the minefields on the Golan Heights. Splashing half a mile along Hezekiah's Tunnel, 200 feet under Jerusalem's limestone rocks,



The 150ft high Monastery Building at Petra can only be reached by climbing 850 steps cut in a mile-long cliff path.

negotiating a half-metre wide water course by candlelight, was another experience; as was Dr Tony Hughes, a former assistant director of Harwell, playing his trumpet on the walls of Jericho!



The 100ft high Treasury Building at Petra was featured in an 'Indiana Jones' film.

## SAFETY FACTS

### Lost time accidents

Culham/Harwell	C	H
Recorded since last issue	0	3
Total this year	0	6
Total reported to HSE '98	0	2
Total days lost in '98	0	20

### Minor accidents (no time lost)

Recorded since last issue	5	12
Total this year	6	35

**There were two radiological incidents and no non-radiological incidents reportable since the last issue of ECHO.**

### Soil samples

Random soil samples on Authority property just outside the south side

of the perimeter fence showed an enhancement of radioactivity above expected background levels (levels of radioactivity in soil vary for a range of reasons). This is being further investigated.

### Breathing Apparatus Failure

A contractor's employee wearing a pressurised breathing suit had to leave his decommissioning task when the air supply to his suit failed. The cause was a faulty air coupling. Although there were no radiological consequences all the other suits were checked, and a new system put in place to check couplings before pressurised suits are declared fit for use.

## OUT & ABOUT

### BNES Lecture

Wednesday 15th April

Dr John Crofts will present the latest of the BNES Central England Branch evening lectures entitled 'Reflections on Nuclear Licensing'. The talk will take place in the ETSU Lecture Room (Building 153 at Harwell), 6pm for 6.30 pm. Everyone is welcome. Contact Louise Gould (H2827) for further details.

### East Hagbourne Fun Run and Walk

Monday May 4th 1998

The 9th Annual Fun Run and Walk will take place in and around East Hagbourne starting at 11am (registration by 10.15am). The 4 1/2-mile course takes in parts of East and West Hagbourne, Upton and Blewbury. The entry fee is £2 for adults and 50p for children and sponsorship money will this year be donated to the Roy Castle Lung Cancer Foundation. Sponsorship/entry forms are available from Jenny (01235 815897), Joe (01235 827891) or John (01235 812726).

### MRC Summer Seminar's

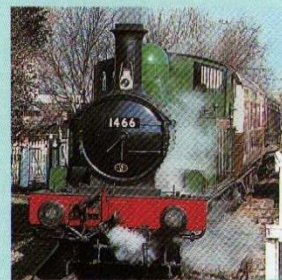
A full and varied summer seminar programme has now been published by MRC, running from April to the end of June, involving many eminent speakers. Anyone wishing to talk to the speakers should arrange this with the speaker's host. For up-to-date details, visit the MRC website: <http://www.har.mrc.ac.uk/events/seminar.html>

### Compton Players' Spring production

23, 23 & 24 April

The Compton Players will be performing 'Trap for a Lonely Man' by Robert Thomas. When Daniel Corban reports his wife missing from their holiday chalet in the French Alps, he doesn't expect to be plunged into an unbelievable nightmare. The ingenious plot will keep the audience guessing right up to the final curtain. Tickets are £4 (senior citizens and children £2) from Judith Bailey on 01635 578443.

### A Steamy Easter



Friday 10 April to Monday 13 April

During the Easter weekend the Great Western Society is celebrating 75 years of the Castle class at Didcot Railway Centre with the return of No5051, Earl Bathurst, together with No4073, Caerphilly Castle, the very first Castle built at Swindon in 1923. When first introduced the Castle class were the most powerful express passenger locomotives in Great Britain and were only replaced by diesel locomotives in the 1960s.

# Harwell Laboratories RECREATIONAL ASSOCIATION

## Putting for pleasure

Would you like to spend your lunch-hour in a restful and relaxing way? The bowling green behind Lloyds Bank is being converted into a golf putting lawn. Members may pre-book the lawn by ringing H3296 and may draw putters and golf balls from the rec. assoc. for a small cover charge and deposit.

## Welcome Jill!

Jill Parker, pictured here, joined the rec. assoc. as assistant secretary just before Christmas and can be found in the office between 9.30am and 2.30pm weekdays. She is well qualified for life in the recreational association, having been educated at the Licensed Victuallers' School in Slough, having variously ran a wine and spirits shop in Portugal for 18 months, spent over three years working in London for Thomson tour operations and more than five years providing administrative support to an accountancy business in Walpukurau, New Zealand! Born in Swansea, Jill now lives in Didcot with husband Steve and two children, Kate and Robbie. We wish her a long and happy stay at Harwell.



## Social Club catering

Did you know that the Harwell Social Club operates a hot and cold takeaway, from Monday to Friday, from 10.30am-1.45pm? There is a large selection of baguettes, large and small baps, sandwiches, plus a good range of hot food. Some appetising vegetarian dishes have recently been added (eg Indian vegetable korma, cheese pasta & broccoli bake, etc). Half baguettes and single round sandwiches also available at half price for those who find the full-size too much of a 'big bite!' Very competitive prices. Everything prepared to order. Telephone orders taken on ext H3296.

## Rec. Association cards

Membership cards for ordinary members (from 1 May 98 - 30 April 99), will be distributed at the end of April. Any member who subscribes by deduction from pay, and has not received a new card by Friday 8 May, please contact the rec. assoc. office. Other members wishing to renew should submit their card, renewal fee and a forwarding address to the rec. association. Contact H3296 with any queries.

## A costly mis-field

Harwell International Cricket Club (HICC!) has over the last few years been raising money for Leukaemia Research through the players' own misfortunes! HICC! have put in place a series of



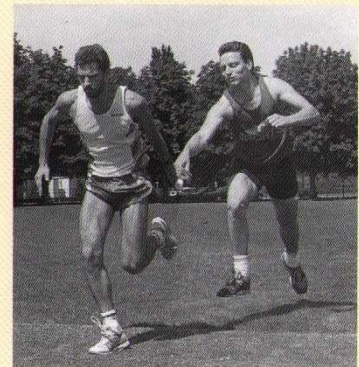
fines levied against offending players at will. These range from a miserly 5p for any wide or no ball bowled, through to 20p for a mis-field that resulted in a run, up to 50p for a dropped catch which can be increased to £1 on appeal to the fines adjudicator if the drop was particularly bad!!

As a result of these fines, the club has just forwarded a cheque in the sum of £228 to Leukaemia Research. It's hard to believe, but with that sort of money being raised the club actually gained promotion last season and won a knockout competition for the third year in a row. Unbelievable. HICC! would like to thank in particular Mark Cowper and Peter Kidd for their large contributions to this donation.

The club runs a variety of teams during the summer designed to give players of all abilities a decent game and if you are interested in turning out for the club this year please contact Steve Oliver H4072 or Graham Dennie H3389.

## Fun Run climax

The famous Harwell Fun Run is coming to the climax of its winter season. The Fun Run has been going once a week for at least 16 winters and has included international athletes and the slowest joggers among its winners. Anyone can win the silver trophy because the Fun Run is cleverly handicapped to reflect individual ability. As ECHO goes to press Ian Vatter of AEA Technology is well ahead in the points competition for best Fun Runner of the 1997/98 season.



Ian Vatter (left) takes the baton in Harwell Running Club's attempt on the world 1500m record!

Harwell Running Club track season starts in May so, if longish distances in the cold and wet have no appeal, pull on the skin-tight lycra and give track running a try. The Harwell track is marked on the field south of the Main Gate car park and track races take place every Tuesday lunchtime, starting at 12.45. Runners usually compete over a couple of distances each week, one sprint and one longer distance, e.g. 200m and 1500m.

The races are handicapped by distance to give runners of either sex and any age an equal chance. Don't worry about not being able to keep up. If you can't catch anyone else you can always chase your previous best and with runners of all abilities taking part, you won't be last.

Running is a great way to health, fitness and it doesn't have to be a chore if you run with friends. Give Will Atkinson a ring on H4370 if you are interested in running club events.

## Tennis coaching

If you are interested in learning how to hit a tennis ball properly or would like to improve your range of strokes, then tennis lessons may be of interest to you. Subject to demand, tennis lessons will be provided by an accredited coach on the Harwell site courts on Tuesday or Thursday evenings. For more information contact Derek Bingham on NRPB 2839, email derek.bingham@nrpb.org.uk

# DIDO open for visitors

**J**ohn Baxter, UKAEA's director of nuclear operations, formally opened the new visitors' entrance to the DIDO reactor, at a ceremony last month watched by former reactor staff.

The keys to DIDO were returned by Mike Down, managing director of Nukem Nuclear Ltd, the main demolition contractors for DIDO's administration block, reactor handling bay, garages and services buildings. The work represented the closing phase of DIDO's decommissioning until eventual clearance to a 'green field' after several decades.

In his remarks, John thanked John Buffery, the project manager, for completing the project on time and to cost and Nukem Nuclear, AEA Technology and other contractors involved in the recent work. He said, "UKAEA leads the field in nuclear decommissioning and now we can show visitors what a decommissioned reactor looks like."

Built in 1956 DIDO achieved criticality on 7 November. It's sister reactor PLUTO achieved criticality a few months later. John Baxter said, "There was always a

healthy rivalry between the reactor teams that spurred each to benchmark against the other and continuously improve reactor operation."

DIDO was originally designed to operate at 10 megawatts, but successive fuel element redesigns increased this to 26 MW in 1977, at which power level it operated until final shutdown in March 1990. In the first weeks after closure it underwent the first stages of decommissioning. All its highly enriched uranium fuel and experiments were unloaded and the 'heavy water' drained from the primary circuit.

Since then all the facilities outside the main reactor block have been removed and the initial phases of the decommissioning programme were completed with demolition of the cooling towers. In the last few months the remaining external buildings were demolished and the new entrance to the 'shell' constructed.



John Buffery, UKAEA DIDO project manager, presented John Baxter with a glass paperweight in the shape of the reactor building. This had been fabricated by the glassblower at Downreay and annealed by Reviss Ltd in their radiation pond at Harwell, giving the glass a straw-coloured hue.

## Fond farewell



John and Margaret Baxter enjoy reliving some past memories recorded in a photographic tribute prepared by Eric Jenkins.

### THANKS FROM JOHN BAXTER

John Baxter left Harwell at the end of February to take up a new challenge as technical director at PowerGen plc. Friends gathered in the Marshall Building to wish him well and pay tribute to his memorable career. Presenting the gifts, colleague and friend Ian Caine remarked, "What do you give a man, who at the age of only 26, was given operational responsibility for a Polaris submarine? Every few years John's career made a significant move and a major step forward. In the process he acquired many friends and he had the happy knack of convincing others that work could be fun. We wish him well in his latest step forward".

During my last few weeks I have tried to see as many of my friends and colleagues at Harwell and Culham to say farewell. Apologies to those of you I missed. Sincere thanks to everybody who contributed to the farewell present of a mountain bike. All road users around Abingdon beware! It has been great fun working with you. Good luck.

JOHN

### Daughters to work

Just a quick reminder that this year's nominated 'Daughters to Work Day' is Thursday 30 April. The age limit restrictions are waived for visitors on this date, providing that:

- Girls taking part should be at least 10 years of age
- A responsible site passholder must accompany them throughout
- Please notify relevant building manager

### Take Our Daughters to Work Day

- No entry to radiological areas
- Visit notices in by 28 April or earlier, showing visitor's age and referring to 'daughters to work day'

For visitor advice at other sites please contact your local head of administration.

THE COPY DEADLINE FOR THE NEXT ISSUE IS: Monday 20 April for publication on Wednesday 6 May 1998.



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