ecchio

THE NEWSLETTER OF THE CULHAM SCIENCE CENTRE & HARWELL BUSINESS CENTRE

JUNE 2000

Innovation Centre up and running

arwell Innovation
Centre – the largest
unit of its kind in
Oxfordshire – was officially
opened by the Rt Hon
Andrew Smith, chief
secretary to the Treasury and
MP for Oxford East before an
audience of key representatives from the local business
and political community.

Guests and members of the press heard how the centre could create up to 250 jobs in the county. It is hoped that, within ten years, tenant companies will have grown to provide jobs for 1,000 people.

Even as the launch ceremony took place, two companies were already based in the 28,000 sq ft centre in B173, Curie Avenue. Stop Press, a design and marketing agency, and NPL (National Physical Laboratory) have chosen to locate their businesses at Harwell.



(from left) Dr David Kingham, Andrew Smith MP and Sir Martin Wood.

UKAEA chief executive, Dr John McKeown, welcomed guests who had assembled in one of the large, open-plan rooms. Sir Martin Wood, founder of the Oxford Trust and chairman of Oxford Instruments, spoke about the success of Oxford Innovation. He noted that Harwell Innovation Centre is the latest and the largest of the seven 'business incubator' units to be established in Oxfordshire.

Andrew Smith gave an inspiring address, speaking about the 'enormous and priceless opportunity to build on the world class expertise at Harwell which is a great source of competitive advantage'. He said, "We are blessed with a history of innovation and it is not a new concept for Harwell or Oxfordshire. As we move into the global economy we have a resource of very good people who will lead the way forward."

He also welcomed the decision to site the new synchrotron at CCLRC Rutherford Appleton Laboratory as an important boost to the local economy and the contribution it

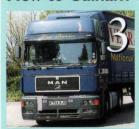
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Harwell Innovation Centre is situated on the Harwell International Business Centre and is managed by Oxford Innovation Ltd. It provides:

- A variety of sizes and office layouts
- Space generally available at short notice
- A central reception and switchboard
- Data ports configurable to telephone, fax, ISDN or data access
- 24-hour access and security
- Photocopying, post handling and general secretarial support
- Use of conference, meeting rooms and presentation equipment
- Kitchen and common room with newspapers
- Large car park
- Access to a network of information sources, professionals and consultants
- A community of like-minded entrepreneurs, individuals and companies
- Investment meetings and contacts with potential investors and sources of funding
- Online information can be found at
- www.harwell.org.uk and www.oxfordinnovation.co.uk
- Contact Mandy Bennett, manager, on 01235 437100 or email: mandy.bennett@oxfordinnovation.co.uk

This Month

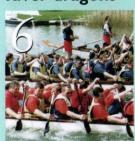
New to Culham



Sea stories



River dragons



Mobile phone report



would make to the wider cultural and scientific advantage of Oxfordshire. Finally he wished success to everyone who will work at the Harwell Innovation Centre now and in the future.

Tours of the centre were hosted by Dr David Kingham, managing director of Oxford Innovation, and also by commercial manager, Dr Phillip Leo. Communal facilities include an impressive meeting room and a large common room and kitchen to help small businesses feel less isolated. Although the centre provides

flexible premises for new mostly science-based businesses, guests also saw the area which will be managed by Thames Valley Business Advice Centre specifically for non-technical companies.

The opening of the Harwell Innovation Centre marked the start of this year's national 'Celebration of Innovation' week. Oxfordshire played an important role in this nationwide week of events which have been organised in partnership with the Innovation Unit at the Department of Trade and Industry.

Stop Press

Stop Press is a design and marketing communications agency at the leading edge of innovation and new technology. In May the business became one of the first tenants in the Harwell Innovation Centre.

The business has been owned and managed by directors Jane and Alan Mason for the last fifteen years and now works for corporate and government clients presenting business information through design, literature, the internet and marketing communications. Clients include Renault UK, Infineum and Willis UK, as well as government departments such as the DETR, and



ETSU based at Harwell.

"We are also delighted to have recently been appointed an e-commerce partner for BT, which enables us to design and host competitively priced e-commerce sites" explained general manager, Peter Morse. "The new e-commerce service means that a business can talk to Stop Press for all aspects of their publicity work".

NPL

The National Physical Laboratory (NPL) has also chosen to occupy offices at the Harwell Innovation Centre. As part of the DTI and DETR programme of environmental best practice, NPL is working with ETSU on a number of projects and felt the proximity would be beneficial for both parties.

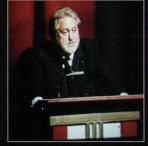
NPL is operated on behalf of the DTI by NPL Management Ltd and is involved in environmental work. Two project managers will be based at Harwell, namely Fiona Williams and Hilary McNeil.

Lord Puttnam's lecture

'Innovation 2000' was marked at Rutherford Appleton Laboratory with a television talk by Lord David Puttnam CBE, director of the Oscar winning film 'Chariots of Fire'.

Speaking 'live' from Bradford, his lecture was beamed by satellite to dozens of venues around Britain and audiences were able to participate using the internet and telephone.

Lord Puttnam spoke about how to create the 'unlimited' company. He said that new ways of considering reward and value, fuelled by technology globalisation, would bring about the next industrial revolution. It was vital that education and industry collaborate as lifelong learning would be needed to sustain



Britain's record of being the source of 40% of the world's best ideas.

"In times of change, learners inherit the earth while the learned inherit the world as it used to be," he commented. Lord Puttnam castigated a media "that shapes a culture of always seeking failure" and urged financiers to take more risk funding innovation. A lively panel debate followed, chaired by Paul Bradstock OBE, chief executive of the Oxford Trust.

Vale views Harwell

ore than a dozen officers and councillors of Vale of White Horse District Council spent a day touring UKAEA facilities at Harwell, hosted by John Wilkins, head of site. Following a briefing on UKAEA's projects to restore the Harwell environment, the visitors toured the partly decommissioned DIDO reactor, the new Vault Store for radioactive wastes, the Western Storage Area groundwater treatment plant and the Southern Storage Area (SSA). Jon Blackmore (pictured front right) explains about the WSA groundwater treatment plant.



wo expanding businesses have chosen premises at Culham Science Centre. Crystalox Ltd and Verran Freight have

moved into over 34,000 sq ft of existing accommodation.

Crystalox, a high tech engineering company, has taken 11,000 sq ft. The company specialises in the design and manufacture of equipment for the purification and crystal growth

tors and electro-optic materials. Dr Iain Dorrity, marketing director commented: "Crystalox products and technical expertise are exported from the UK to

of metals, alloys, semiconduc-

universities and industrial research organisations around the world. Last year the company won a Queen's Award for export achievement and as our business continues to grow, we are expanding from our base in Wantage to the Culham Science Centre".

Verran Freight, an international road haulage company, is also expanding its operation and has taken 26,000 sq ft at Culham as its new headquarters.

> "We have three other sites in Oxford, but chose Culham Science Centre as our headquarters because of the site's excellent transport links to the M4, M40 and the rail-head at Didcot Parkway," said office manager,

Lee Russell.



Culham has excellent road and rail links.

John Hedderley retires

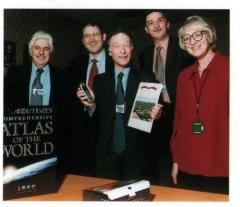
fter a career with UKAEA of more than 25 years John retired at the end of March.

John joined UKAEA at Harwell as a project accountant in Building 150. This was followed by spells as finance officer to the energy technology support unit, head of financial accounting for the Harwell site, business accountant for environment and energy, divisional accountant at Fusion and finally as head of internal audit and consultancy.

A presentation was made by Paul White, director of finance and commercial division. In response John recalled some of the changes that had taken place since he first came to Harwell. At that time the site had its own bakery, it managed several hundred houses, there were three staff hostels on site as well as one in Abingdon and more than 60 home to work buses. The one thing that had not changed was the people. He very much valued the fact that it was

> possible to have proper discussions (and even to disagree) with colleagues without falling out!

John is pictured, centre, with (from left): John Adams. Nick Martin, Peter Russell and Ioan Stimson





Festival of science and innovation

he 'Festival of Science & Innovation' organised by The Oxford Trust will be taking place in South Oxfordshire from 19 June - 7 July. The main events include:

Tuesday 4 July, RAL, 9.30am-2.30pm

Schools Workshop: Designing a Millennium Wheel run by INPUT National and The Oxford Trust.

Tuesday 4 July, RAL, 6.30pm

Festival Lecture: Reinventing the Wheel by Julia Barfield. Marks Barfield Architects, taking their lead from how nature designs structures in space and geometry, create cultural landmarks that regenerate and revitalise cities. They are now well known as the designers of the British Airways London Eye. Suitable for 14 years and upwards.

Wednesday 5 July, St Birinus School, 2pm

Schools Lecture: The Rise of the Superbug - Apocalypse Now? by Dr Martin Westwell

Thursday 6 July, RAL, 6.30pm

Innovation Lecture: Innovation Means Business by Dr Peter Watson, chief executive, AEA Technology

Dr Peter Watson will talk about what innovation is, give examples of successes and failures and try to explain why it can be difficult. He will look at why it is critical for organisations to grasp innovation; how it can be stifled, what the ingredients of success are and how AEA Technology's 'Innovation Plus' initiative aims to help.

Friday 7 July, RAL, 7pm

Family Show: The Big 2000 by The Oxford Trust

For details and booking telephone Alison Hendry on 01865 728953.

Canadian MPs visit European rolling Culham

delegation of MPs, led by Adelegation of Adeleg and CEO of ITER Canada, visited Culham a few weeks ago. The aim of the trip was to see at first hand the social and economic impact of hosting an international project like JET.

Two nations, Canada and Japan, are currently in the running to host the International Thermonuclear Experimental Reactor (ITER) programme which represents the 'next step' fusion power plant. JET is the nearest in scale and operating conditions to ITER.

As well as visiting the JET facility, operated by UKAEA under the joint operating contract, delegates also met local community representatives including Oxford West & Abingdon MP, Dr Evan



Chris Carpenter (right) guides Canada ITER visitors (from left): Alex Shepherd, Marlene Jennings, Bernard Patry and Jerry Pickard

Harris and local council members.

"UKAEA Fusion was pleased to arrange the event as a facilitator," comments Chris Carpenter, UKAEA Culham PR manager. "We would welcome similar parties from other countries submitting a bid and would not want to be seen to support one particular nation."

ITER Canada plans to have its bid completed by April 2001. Once the decision has been taken, development work is scheduled to begin at the end of 2005 at the earliest.

Vacuums on display

one-day exhibition at Culham by Pfeiffer Vacuum explored the latest in leak detection, mass spectrometry, vacuum gauges and



vacuum pump technology. Peter Knight, sales engineer at Pfeiffer Vacuum, said, "For us a one day exhibition at a large site like this allows existing contacts to see and experiment with new equipment, and attracts new contacts. It's a good opportunity for staff to see new products without having to spend the half or full day away from their desks." Peter can be contacted for more information on 01908 364502.

Fusion explained

A colourful new brochure exploring the fusion research work taking place at the Culham Science Centre is now available. Using non-technical language and simplified diagrams, the guide is an ideal introduction to this complex subject and relates experimental work with the quest to find new energy sources. Copies of the brochure, entitled 'fusion for the future ... technology for today' are available from Heather Clark on C3363.

programme begins

nder the 'new spirit' of the JET agreement, June sees the start of a rolling programme of visiting international scientists at Culham.

Some 170 scientists from member states involved in the Euratom treaty will be visiting Culham between June and November to undertake experiments at IET as part of the EFDA (European Fusion Development Agreement) work programme.

Three campaigns are planned - two lasting two months and a third one-month campaign - involving a maximum of 60 staff at any one time. Incoming staff will be resident in local B&B's, hotels or timeshare houses in Abingdon or Oxford, depending on their length of stay.

By involving a pan-European team of secondees there are greater opportunities for younger scientists and the



The programme is co-ordinated by a close support unit based permanently at IET and led by EFTA IET associate leader, Jerome Pamela who is pictured here with taskforce leaders.

age range spans 25 to 60-year olds. A similar campaign is planned for 2001. Cross-fertilisation of international experience and skills will also result as task forces are grouped by speciality, rather than nationality.

Contamination Control - Awareness Campaign

During the middle of June 2000 there will be an awareness campaign around the Harwell site on radioactive contamination control. The venues for the display will be B220, LETP, B462, B393.6 and B551. Other venues may be added. Please keep your eyes open for the campaign and take a few minutes to have a look. If you require further information contact your RPA or Kathleen Stevenson on H3108.

Venturefest 2000

UKAEA's central property team has booked a stand at the forthcoming Venturefest in Oxford, on 26/27 June at Oxford Brookes University. Their display will feature both Culham and Harwell at the event which is described as 'Oxford's international fair for entrepreneurs'.

Golfing for charity

Sandi Toksvig makes her return to Hinksey Heights golf course near Oxford on Friday 14 July to take part in the ABC Charity Cup Competition. Launched last year the event raised over £3,000 for Action against Breast Cancer, the Harwell-based charity. If you would like to take part in this year's competition - an 18-hole, 4-ball Stableford, contact David Heads at the golf course on 01865 327775.

Avoid Culham queues

The 37th Culham Plasma Physics Summer School will be held from Monday 10 July until Friday 21 July this year. Approximately 50 students will be using the restaurant for lunch each day at 12.45pm so staff are advised to take lunch before this time to avoid long queues.

Correction

In the May issue the company name, Culham Electromagnetics and Lightning Ltd, was incorrectly printed. We apologise for any confusion.

Tracking world's



An ascending (nighttime) image showing the continued break-up of the B15 iceberg, taken on the 13th April 2000.

pace technology is being used to track a huge iceberg that recently broke away from the Ross ice shelf in the Antarctic. B15, as it has been named by the US National Ice Centre, is about 300km long and 40km wide.

Satellite images taken by the ATSR-2 instrument, processed at RAL, have tracked the iceberg which broke away from the main ice shelf at the end of March. Since then a smaller iceberg has detached from the western tip of its huge parent and is making steady progress northwest. ATSR-2 measures the temperature of the surface of the earth with great precision.

"The temperature of the water and the ice is obviously different and this enables us to 'see' the ice masses", explains Nigel Houghton of RAL's space science and technology department. "Once an iceberg is free it often moves fairly quickly. Tracking the Larsen iceberg in 1995 we saw it drift about 6km a day 'though they can travel at up to 30km a day and interfere with ocean shipping lanes".

A Turkish delight

Andrew Darke, a UKAEA Fusion project engineer, had a holiday to remember when he joined a crew to charter a boat in the Turkish Aegean. The party was drawn from Goring-on-Tharnes Sailing Club where Andrew has been a member for three years, though he has been sailing for at least 30 years. There were many high and low points but here is a typical day which captures the mood of the trip...

A clear sunrise. Half the crew on sailing duty, the other half responsible for cleaning, cooking, provisions, etc. Breakfast on board. Sail towards the destination making the most of lighter winds in the morning. Find an isolated bay and anchor. Have a beer before lunch on board. Swim and snorkel in clear warm water. Continue sailing to destination. Indulge in some retail therapy, or explore Byzantine ruins, or just do nothing! Shower and change for the evening with gin and tonic from 6pm while waiting for the sun to set behind the horizon. Dinner in a local restaurant. Back to the boat for a nightcap and bed. It's a hard life!



Heading for the open sea.

OUT & ABOUT

Fusion lecture

'Fusion progress to and beyond the year 2000' is the title of a lecture to be given by Derek Robinson, UKAEA director of Fusion, on Thursday 29 June at RSA, 8 John Adam Street, London WC2. The lecture is being organised by the Institution of Electrical Engineers. Refreshments at 5.30 for a 6pm start. For more information please contact Claudine Harris on 020 7344 5433, email charris@iee.org.uk

Adderbury gardens

The pretty village of Adderbury (located to the south of Banbury) is holding a 'secret gardens of Adderbury day' on Sunday 25 June from 2-6pm. Sixteen gardens will be open to the public from small court-yards up to those with several acres. Visitors can see cottage gardens, farmhouse gardens, one garden that has been grown totally from seed, imaginative vegetable cultivation, bonsai, and one of the largest collections of clematis. Entry is £3 for all 16

gardens in aid of Adderbury Village Hall Improvement Fund. Teas will be served and there will be plants for sale. Contact Aline Griffiths on 01295 810002 or H2051.

Entertainment by gaslight

Stagelights present 'Gaslight', a Victorian thriller by Patrick Hamilton on the 15th, 16th and 17th June at 7:30pm in Old Mill Hall, Grove. Tickets priced at £4, (First Night and All Concessions £3) are available from Brett's Community Pharmacy in Grove; Wessex Press in Wantage; or telephone 01235 770736 for information or advance bookings.

Summer fete

A summer fete will be held on Saturday 1st July at St Peter's Church, Newlands Avenue, Didcot, from 12 noon 'til 4pm. Many stalls, attractions including birds of prey, face painting, Didcot Fire Service, refreshments, grand draw and much more.

Young scientist wins MP's prize



one of five young scientists from RAL who presented their research to MPs at the House of Commons has won a prize for her poster describing solar eclipse data gathered last year. Elizabeth Clarke was awarded the 'Glaxo-Wellcome poster prize for physics'.

Elizabeth is studying for an MSc (Hons) Engineering Physics degree at Sheffield Hallam University. She is spending her 'sandwich' year in the space science and technology department at RAL, examining the ionosphere.

"We are comparing data gathered during the total eclipse with historical data to determine how much the increased solar activity has affected Earth", said Elizabeth. "I enjoyed explaining the research to MPs. They were very interested in the implications the research has for our understanding of global warming. Being awarded the £100 prize was a great bonus!"

Messing about on the river

n uncharacteristically hot May Sunday, a quiet stretch of the Thames at Abingdon, and 40 teams battling it out on the river, made the perfect family event for Abingdon Rotary Club. Fundraising surrounding the Dragon Boat 2000 day looks likely to top £60,000 for Macmillan Cancer Relief, Helen House and Sobell House Hospices and other charities.

Staff from NRPB had taken part last year and were keen to repeat the experience. Dressed in Robinson Crusoe 'ship-wrecked' style, they were racing against surgeons in operating gowns, hats and masks, school girls of both sexes from St Mary's School, clowns and Vikings. They took part in three heats against three other teams

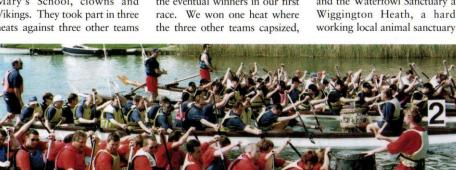


The NRPB castaways.

with the fastest time winning them thirteenth place, in the semi-finals.

"We definitely improved as the day went on," says Gareth Thomas, "and we actually beat the eventual winners in our first race. We won one heat where the three other teams capsized, but we had to have a rerun."

Their plight was lost in the semi-finals following a big collision. Around £1,000 was raised through their efforts for the national Alzheimer's charity and the Waterfowl Sanctuary at Wiggington Heath, a hardworking local animal sanctuary.



Dragon boats racing.

Hayfever sufferer?

Synexus are looking for volunteers to help with a research study into the effectiveness of hayfever medication. The study will compare a new drug to an existing medication and placebo. Anybody over 18 years may be eligible to take part. The study lasts approximately four weeks which includes up to 14 days when the patient is asked to complete a diary recording their symptoms, followed by a twoweek treatment period. The visits would take place at Synexus B551.11 Harwell and would involve taking blood and urine samples, having an ECG and a skin test to confirm that the patient is allergic to allergens. Anybody interested in taking part can contact Synexus on 01235 434218 for more information.

Abingdon Korfball

orfball is a mixed-sex sport which is a fast-moving relation of basketball and netball. No previous experience is needed to play. The Abingdon Korball Club was formed in May and is looking for new members. emphasis is on fun and everyone is welcome, even complete beginners. The club plays outside on the field of John Mason School on Tuesdays between 6.30-8pm throughout the summer. In the winter season play continues indoors. Emma Lineham of AEA Technology is a member and would be happy to explain about the game to anyone who might be interested. Emma can be contacted on H3674.





No jubilee in millennium year

Harwell International FC reserves narrowly lost in the final of the Reading Jubilee Cup to opponents, Radstock FC, played at Reading Town FC in April. After a goal-less first half the game came alive with Radstock opening their account. This spurred on the Harwell team to take the lead with two goals in five minutes from Guiry and Harris.

With five minutes of normal time left the site's side had the cruellest of luck when Pilley netted an own goal and the game went into extra time where the 2-2 score line remained after two hours' play. The game was finally decided on penalties with the reserves missing the only deciding penalty.

The club thanks the site's sponsors, Johnson Controls, for once again providing transport to the final, and also Harwell Drying Restoration Services for sponsoring the reserves kit during the season.

Please note that light training continues as usual throughout the summer on Wednesday evenings. Call 01235 511428 for details.

Summer Track Races

Try your speed at the Harwell Running Club weekly races run on the grass track marked out on the rugby playing field near main gate. Events range from 100m up to 5km and take place on Tuesdays at 12.30pm. The events are age and sex graded to even up races according to recognised standards. A wide variety of abilities take part. Occasional fun field events such as a sergeant jump or baseball throw are included too. Feel free to just turn up for a session. For more information and a list of events see the AEAT intranet or http://www.geocities.com/ harwell_runner/ or contact pete.stepney@hyprotech.com

SAFETY **Update**

During decommissioning operations at Harwell monitoring equipment indicated unexpected levels of alpha activity. A number of personnel were subject to monitoring and an investigation was convened. Mobile phones and health

here was standing room only in the Cockcroft Hall at Harwell to hear the NRPB Chilton Lecture on the subject of 'mobile phones and health' by Sir William Stewart, chairman of the IEGMP (Independent Expert Group on Mobile Phones).

The IEGMP is an independent expert group set up by the government to examine the possible effects of mobile phones, base stations and transmitters on health. Following the recent publication of its report, several members of the group joined Sir William to explore the main findings.

The event was chaired by Sir Walter Bodmer, NRPB chairman, who helped establish the IEGMP. He introduced Sir William Stewart who outlined the aims of the group and then the principal conclusions of the report.

Looking at the topic from a physics standpoint, Professor Lawrence Challis, explained the technology of the mobile phone network. He discussed SAR (standard adoption rate) which refers to the amount of energy absorbed in the body by the phone user and is dependent on

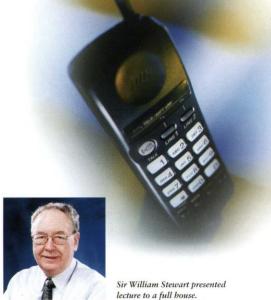
the power output of the phone and its design. The report recommends that SAR values for different models must be readily accessible to consumers.

One of two lay members of the group was Marie-Noëlle Barton who discussed her main area of interest - the concerns of the public. To determine the issues which most concerned ordinary people a series of meetings, both public and with individuals, and letters and submissions from individuals and organisations were assimilated. By far the most worries were about base stations or transmission masts - 41% compared to 23% concerned about the use of mobile phones.

She also found that the media provided virtually the sole source of information for most people. The group has recommended that a leaflet be sent to every household in the UK.



A wet day failed to dampen the enthusiasm of 20 staff from the Department of Trade & Industry visiting Culham Science Centre and Harwell International Business Centre in May for a familiarisation visit. One group is pictured here in the DIDO foyer. UKAEA's Beth Taylor, who hosted the Harwell visit said later; "I had positive feedback from Jon Munday, the DTI training liaison officer who reported to me that their day went very well. I am pleased that the hard work put in to organise four tours at the sites means that many more staff at the DTI can feel they know us better."



Prof Michael Rugg is an expert in the field of cognitive neuroscience and gave an insight into the research which had been undertaken to date. Although there are areas related to health which demand further research, the one overriding conclusion was that the use of a mobile phone while driving, whether hand-held or hands-free, substantially increased the risk of an accident.

Biological studies were explained by Professor Colin Blakemore and Prof David Coggon considered the epidemiological work undertaken.

The meeting was then thrown open to questions from the floor including a query about the siting of a mast close to a school and the maximum beam of intensity from the base station; how the panel would define the term 'well-being' used in the report; comparing use while driving with conversing with a passenger and the government's timescale for putting the recommendations into practice.

During this illuminating lecture there was one point of levity when a mobile phone broke the hush. It belonged to

none other than Sir William who retrieved the phone from his jacket pocket and answered it, to the great amusement of the audience!

The full report is available on the IEGMP website: www.iegmp.org.uk and a copy of the summary is also available from the IEGMP secretariat, c/o NRPB information office, tel: 01235 822742.

Report revises levels

NRPB has published a new report containing a revised estimate of the radiological impact of routine atmospheric and liquid radioactive discharges from all UK civil nuclear sites. Using the most recent assessment methods the report updates previous estimates published in 1990. Calculations show that the collective dose has steadily decreased, due mainly to a reduction in the liquid radioactive discharges from Sellafield. The report is available from the NRPB information office, telephone 01235 822742.

THE COPY DEADLINE FOR THE NEXT ISSUE IS: Monday 26 June for publication on Wednesday 12 July 2000.



ECHO is published by UKAEA, 521 Harwell, Didcot, Oxon OX11 0RA. Editor: Valerie Judd. Tel. (01865) 331153 Fax. (01865) 331154. E-mail: vipr@globalnet.co.uk

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