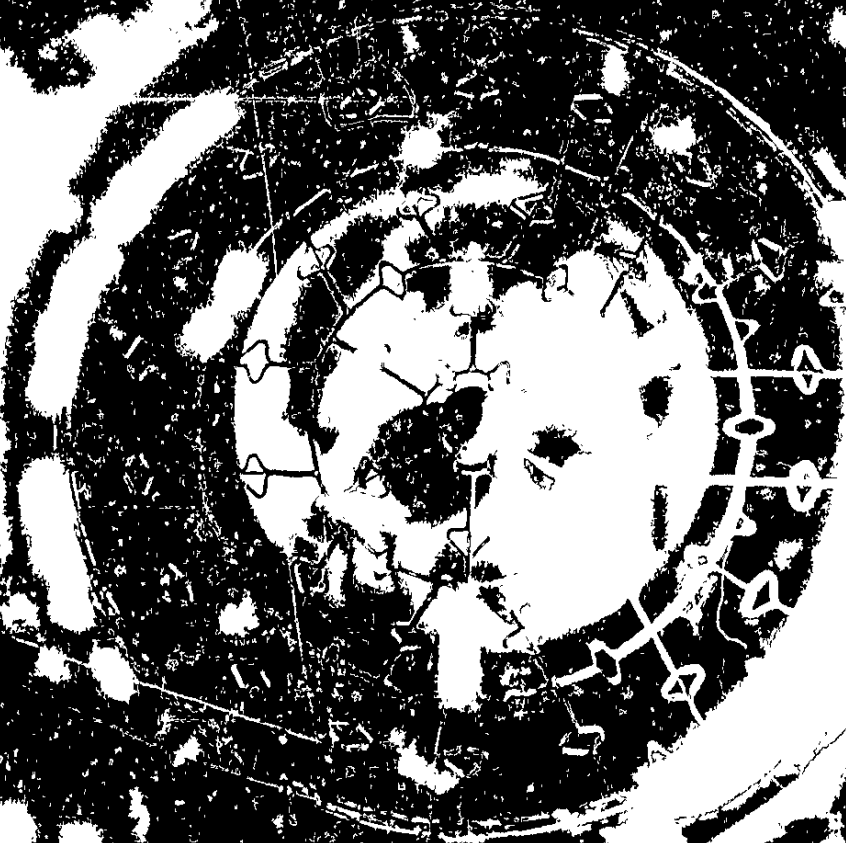


Annual Report &
Accounts
1984/85

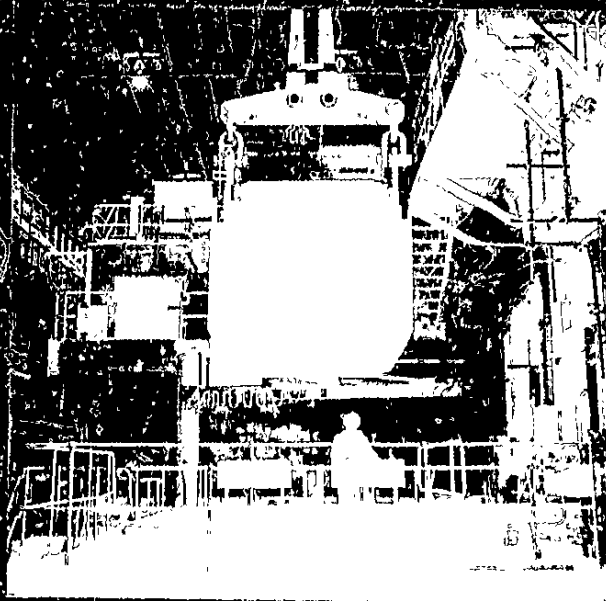
BNFL

British Nuclear Fuels plc



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Flask being lowered into an inlet cell in Pond 5, Sellafield.

BRITISH NUCLEAR FUELS plc
Chairman's Review



Con Allday CBE

This has been a year of steady progress, with a particularly outstanding increase in our export earnings, which were up by more than 40 per cent. Despite the rise in operating profit, we were unable to improve on last year's record pre-tax profit level. This was because production setbacks in the largest area of our business—reprocessing, and the need for substantially increased provisions for waste treatment limited the increase in operating profit to the extent that we were unable to compensate fully for higher financial charges. The overall result has been that the Group made a pre-tax profit of £68M, which has enabled the Directors to recommend a total dividend payment of £16.3M, the same as last year. I had hoped that we would do better than this, but there are good grounds for believing that the trend of increasing profits achieved over recent years will be resumed next year. This confidence is based on several factors.

The substantial increase in export earnings achieved during the year is likely to be continued despite fierce competition and these earnings in overseas markets will be reinforced from the home market as new nuclear power stations come to full power and as the Group reaps the benefit of an expanding capital expenditure programme.

In addition, I am cautiously optimistic that the production difficulties we experienced at Sellafield with reprocessing operations will be overcome before the end of the current year as new plants are commissioned and brought into operation.

The new Receipt and Decanning Plant for Magnox fuel and the Receipt and Dismantling Plant for Advanced Gas-cooled Reactor fuel (Pond 5) will be particularly important in this respect.



Upper maintenance area of SIXEP.

Another major plant being brought into operation at Sellafield is the Site Ion Exchange Effluent Plant (SIXEP) which is a significant component of our continuing and successful programme to reduce discharges of low level radioactive effluent to the sea from Sellafield. The commissioning of SIXEP has

gone particularly well and discharges in 1985 are expected to be appreciably below previous levels.

The Group is committed to getting sea discharges down to very low levels—far lower than those justified by any simple cost/benefit analysis. As part of this commitment we have announced during the year details of a major project costing some £150M to provide substantial additional effluent treatment and storage plant at Sellafield. Each stage of this project will be introduced progressively with corresponding reductions in discharges, with a target for completion by 1991.

The announcement of this further programme of environmental protection has undoubtedly influenced the public to take a more favourable attitude towards the Company's reprocessing operations.

Public Opinion surveys carried out on behalf of the Group indicate that public confidence in the way we manage our operations, although undoubtedly affected by the Sellafield incident in November 1983, has substantially recovered.

At the end of the recent prosecution of the Company, described in more detail elsewhere in the Report,* the Judge drew attention to the impressive quality of the people who work for the Company and who had given evidence during the trial. He acknowledged that Sellafield is run at all levels by highly qualified people who are sensible, conscientious, and thorough. I add my appreciation to them and to all who work in the Company.

It is fully recognised and accepted that the public's attitude to the Company will be based on its performance in protecting the environment, local population, and its own workforce. Nevertheless greater efforts are being put into securing better public understanding of our achievements and of the benefits offered through us by nuclear power.

During the year Dr Donald Avery, Deputy Managing Director, retired from the Company, and I would like to thank him for the very considerable contribution he made to the Company's success over the years. He was particularly concerned with our long-term planning, and was also closely associated with development of the BNFL Compensation Agreement for Radiation Linked Diseases, which I believe will prove to have been a major advance in this aspect of industrial relations. Dr Avery has been succeeded as Deputy Chief Executive by Mr Jack Tatlock.

The Board was strengthened during the year by the appointment of two new non-Executive Directors, Mr Christopher Harding and Mr John Wills. We welcome them and are confident that they will make a significant contribution to our affairs.

*See page 38.

Con Allday, CBE

Except where otherwise stated all figures in these Accounts are expressed in millions of £'s (£M).

	1985	1984
	£M	£M
Turnover	545	460
Operating Profit	138	125
Profit on ordinary activities before taxation	68	71
Profit for the Financial Year	54	51
Dividends	16	16
Profit retained	37	35
Capital expenditure	367	296
Assets Employed	1,577	1,244
Shareholders' Interest (Average for Year)	201	165
Profit for the financial year related to average shareholders' interest	27%	31%
Number of employees (Average for Year)	15,678	15,542

BRITISH NUCLEAR FUELS plc

Company Objectives

The Company's primary objectives are: -

- i. To earn a return on capital employed which is satisfactory to the shareholder and is consistent with the contractual, legal and social framework within which the Company operates.
- ii. To achieve a high degree of self financing in meeting the Company's future investment requirements.
- iii. To provide an efficient and economic fuelling service to the UK Generating Boards and to meet the needs of other domestic customers.
- iv. To obtain profitable overseas business in order to provide greater growth, with its attendant economies of scale, than that offered by the UK market alone.

These objectives are pursued subject to two overriding conditions:

- i. that standards of safety and environmental protection are maintained well within statutory requirements; and
- ii. that overseas business is only undertaken within the guidelines laid down by Government to avoid increasing the risk of proliferation of nuclear weapons.

In structuring its business, the Company pays particular attention to the remuneration and welfare of its present employees and, through expansion, seeks both to extend their opportunities and offer additional employment prospects.

BNFL and the Nuclear Industry

British Nuclear Fuels plc (BNFL) and its predecessors have been manufacturing fuel for nuclear reactors, reprocessing and recycling the fuel after use and managing the waste* products for nearly 40 years. Few organisations in the world are capable of providing so comprehensive a range of nuclear fuel services.

In its present form the Company dates from 1971 when it was created out of the former Production Group of the United Kingdom Atomic Energy Authority (UKAEA). The change in status provided greater financial and administrative flexibility and has enabled the Company to expand and develop on fully commercial lines. BNFL became a public limited company in 1984 and all the shares are held by the Government.

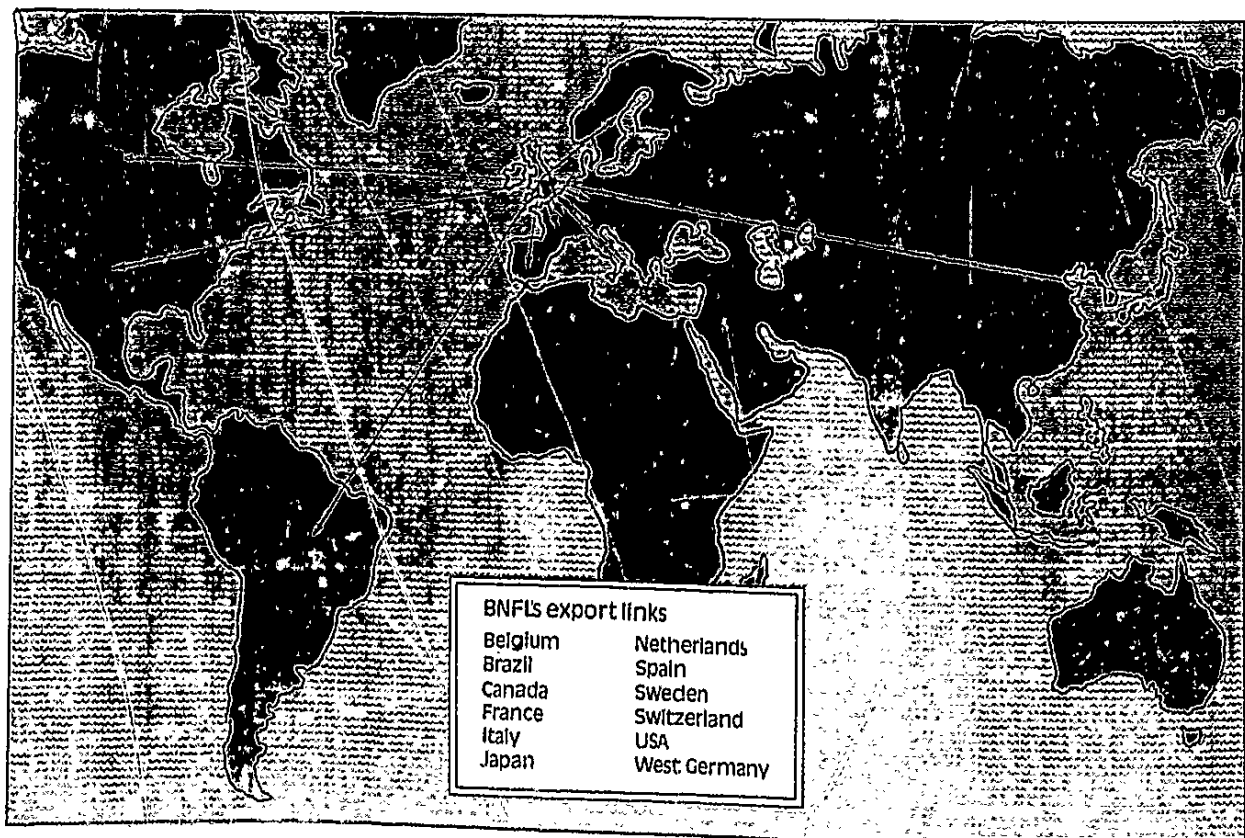
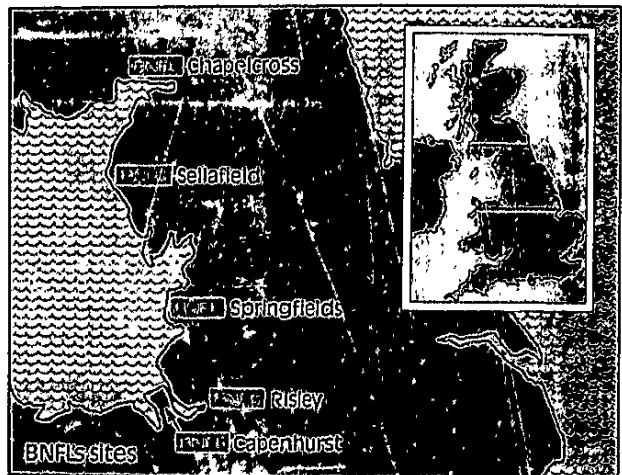
The Company, employing over 15000 people, has four divisions, reflecting the main nuclear fuel cycle processes—fuel manufacture (Fuel Division), uranium enrichment (Enrichment Division), reprocessing of irradiated fuel and design and construction of reprocessing and associated plants (Reprocessing Operations and Reprocessing Engineering Divisions).

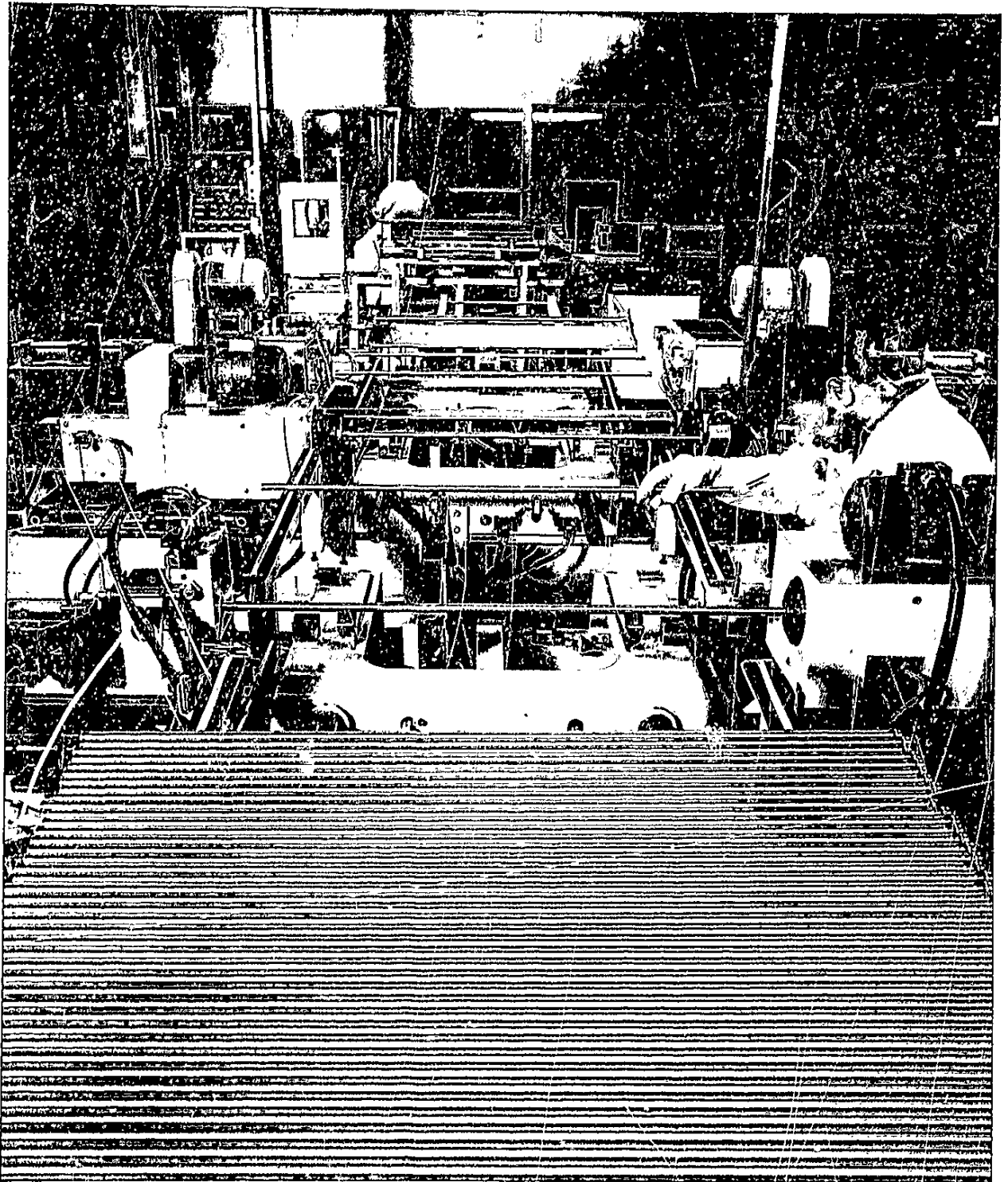
Fuel is manufactured at Springfields near Preston, enriched at Capenhurst, near Chester and reprocessed at Sellafield in West Cumbria. The Company also owns and operates two nuclear power stations—Calder Hall on the Sellafield site and Chapelcross in

Dumfriesshire. Engineering and design associated with the Company's new reprocessing and waste management plants is located, together with the Head Office, at Risley, near Warrington, Cheshire.

BNFL's largest customers are the UK electricity Generating Boards for whom some five million Magnox fuel elements and AGR fuel pins have been produced, equivalent in energy terms to more than 600 million tonnes of coal.

*See page 64 for categories of wastes.





Canning of AGR fuel at Springfields

The Generating Boards now operate two kinds of nuclear reactors in Britain—nine Magnox stations which use natural uranium metal fuel and are based on the Calder Hall design and five Advanced Gas-cooled Reactor stations (AGRs) which use enriched uranium oxide fuel. A further two AGR stations are under construction.

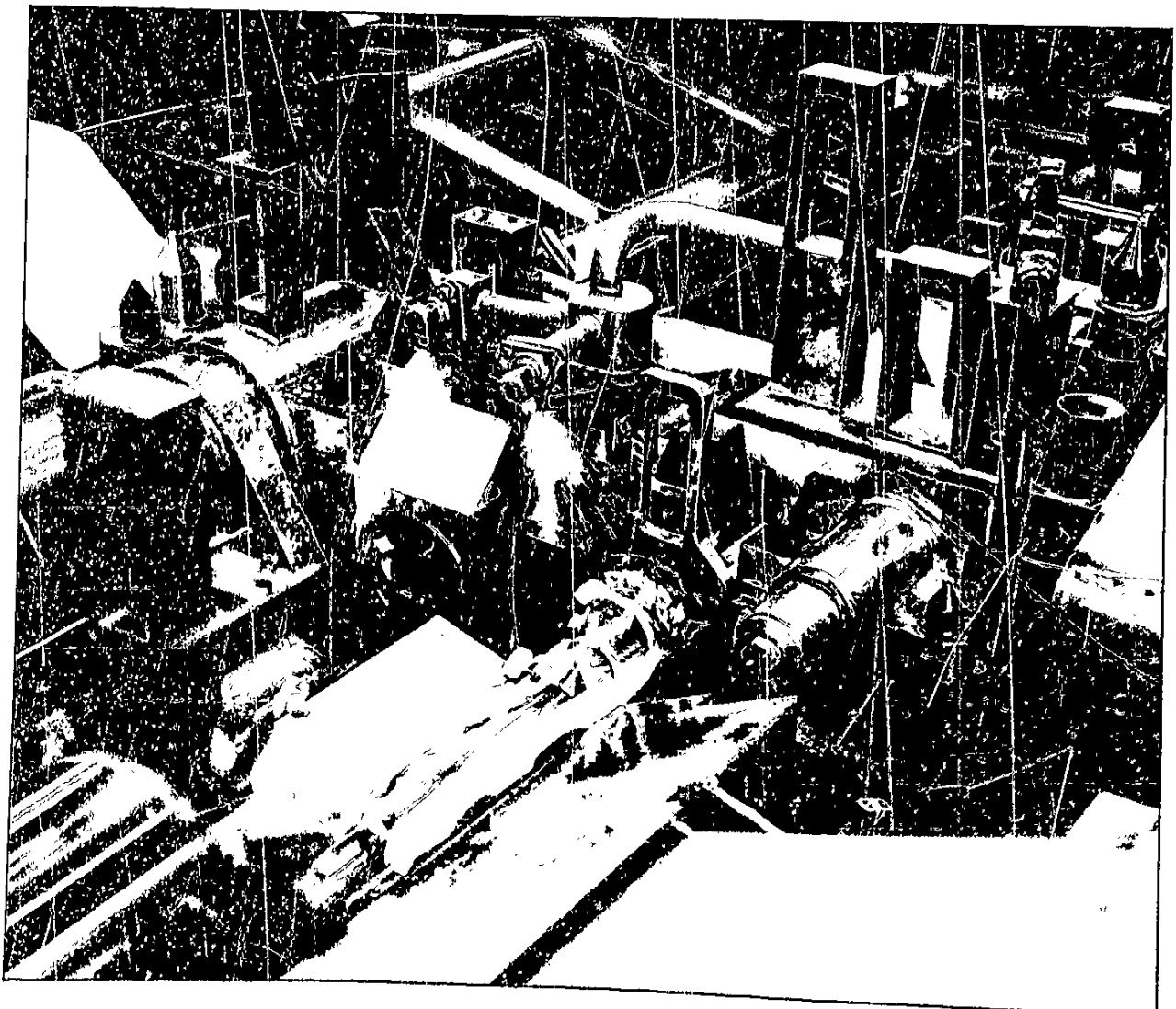
In the rest of the world nuclear power is overwhelmingly based on light water reactor technology. The Central Electricity Generating Board wish to introduce this technology into Britain. The public inquiry into the Board's proposal to build the first British pressurised water reactor at Sizewell, at which BNFL gave evidence, has ended after 340 days and the Inspector's report is currently awaited.

BNFL has supplied intermediate products and a small number of complete fuel assemblies for pressurised water reactors. The Company is confident that with this experience, its research and development programme and its licensing agreement with Westinghouse, it is well placed to supply the fuel for

UK PWRs, in the event that the outcome of the Sizewell Inquiry favours their adoption, and also to obtain further export orders.

About 20 per cent of the UK's electricity is now generated by nuclear power and new stations under construction will take the nuclear contribution to about a quarter of the total.

As well as serving the UK generating boards, BNFL has also developed export markets for its nuclear fuel cycle services. Fuel and intermediate products have been supplied for stations in Japan, Italy, Belgium, the Netherlands, France, West Germany and the USA. Notably, the Company now supplies about 15 per cent of the available world market for uranium hexafluoride (UF_6)—an intermediate stage in the production of the oxide fuels on which most modern reactors depend. Sellafield is a world leader in reprocessing with valuable overseas contracts from customers in Japan, Italy, Sweden, Switzerland, the Netherlands and West Germany. The total future order book for overseas reprocessing including transport is now worth £2700



million. BNFL plays a major role in export business to Japan. In the current year, for example, total sales income and advance payments from Japan were in excess of £100 million.

Nuclear technology developed by BNFL has been licensed for use by other manufacturers abroad, with further benefit to the Company in both overseas earnings and international reputation.

The international scale of the nuclear industry has provided BNFL with many opportunities for fruitful co-operation with overseas interests. With Dutch and West German companies the Company is a member of the Urenco enrichment enterprise; it is the majority shareholder in Pacific Nuclear Transport Limited which transports spent fuel from Japan to Europe and also has shares in a number of other companies involved in the fuel cycle.

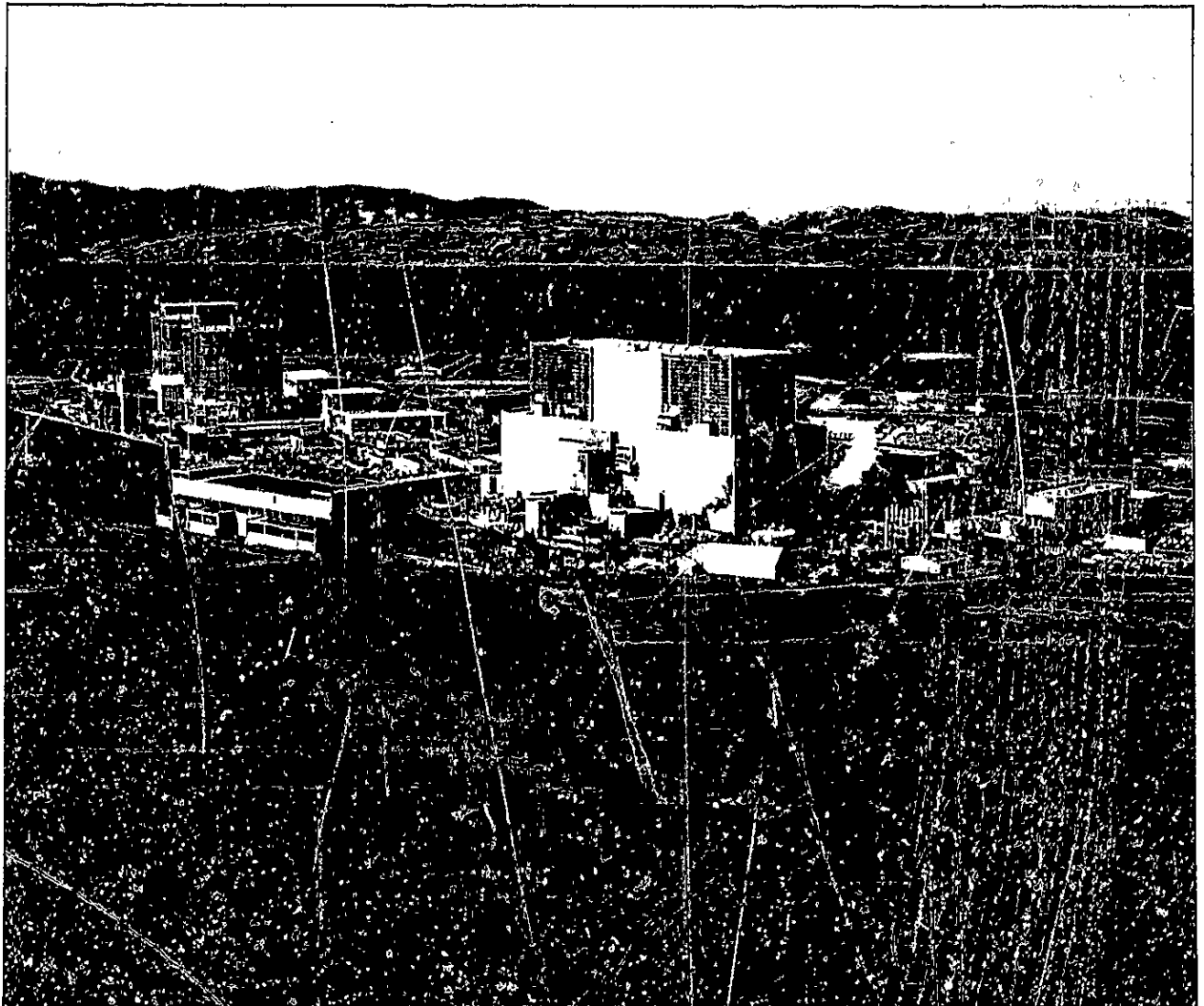
The scope for further growth in export business provides the Company with a promising but challenging prospect. World-wide, nuclear power supplies 12 per cent of the electricity produced with more than 300

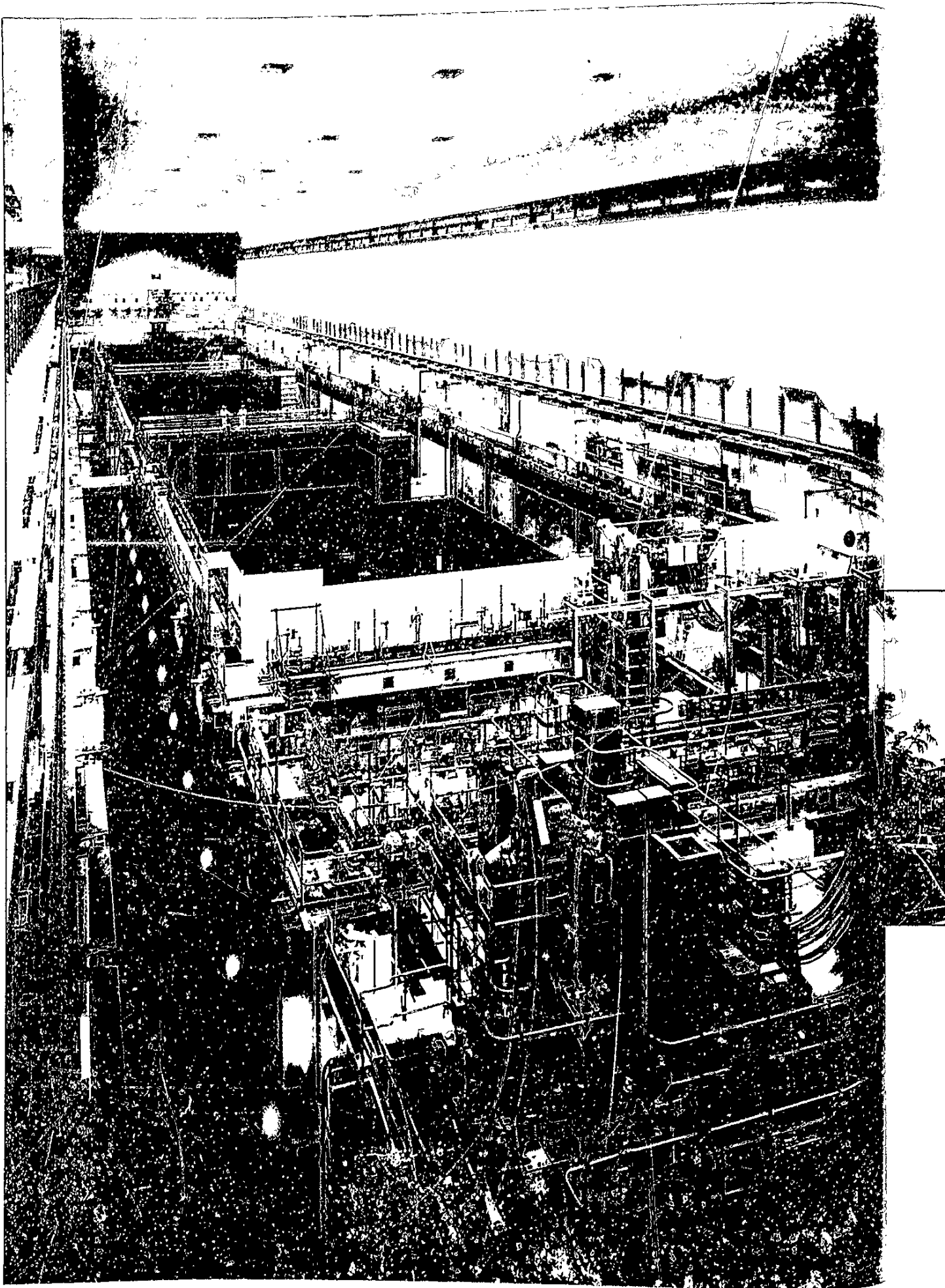
operating reactors in 25 nations. Some 200 reactors are under construction and more than 120 are planned. The International Atomic Energy Agency forecasts that world-wide nuclear electricity generation will reach 20 per cent by the year 2000. Within the EEC, nuclear electricity is growing faster than other energy sectors. 26 per cent of its electricity was generated by nuclear power in 1984, and is expected to reach 30 per cent this year.

The market for this growing business is, however, highly competitive with a world-wide surplus of capacity in many areas of the nuclear fuel cycle.

Left) Decanning of Magnox fuel at Sellafield.

Magnox and AGR power stations at Hunterston in Scotland.





Highlights of the Year

The most notable achievement of the year was an increase of more than 40 per cent in export sales. In addition there have been major developments in all aspects of the Company's operations. There was the launch of a £150 million project to achieve further reductions in discharges of radioactivity to the Irish Sea from Sellafield. New enrichment contracts were announced by Urenco bringing £150 million of further work to Capenhurst. At Sellafield, the major features of the refurbishment of the reprocessing plant neared completion. These are the plants for the receipt and decanning of Magnox fuel (Pond 5), which will also receive and dismantle fuel from Advanced Gas-cooled Reactors, and the Site Ion Exchange Effluent Plant (SIXEP), which will remove radioactivity from pond-based discharges.

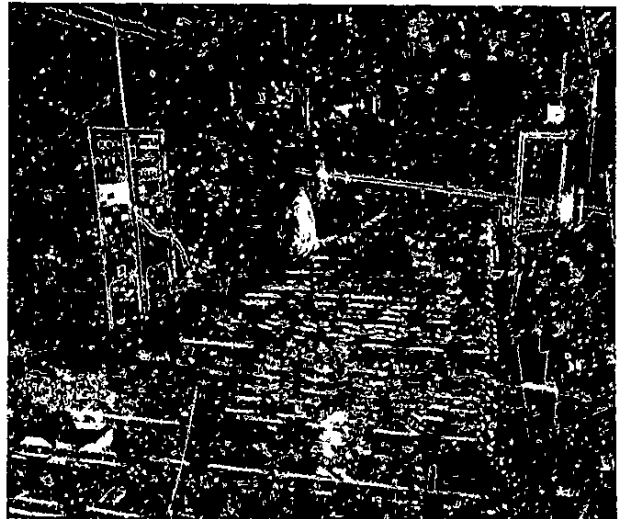
At Risley, BNFL has a new head office and engineering design building, Hinton House, named after one of the founders of the British nuclear industry, was opened by the Rt Hon Peter Walker MP, Secretary of State for Energy, in January.

Appropriately, as the headquarters of a Company dedicated to the development of one of the most efficient forms of energy, Hinton House was designed and built with a keen eye to efficient energy conservation. It provides an up-to-date office environment, flexible enough to cater for changing needs. Most of the staff in the building are engaged on the Company's main reprocessing engineering projects.

At Springfields, a new plant for the efficient recovery and recycle of enriched uranium residues is being commissioned. It will collect residues arising during the conversion of uranium dioxide to oxide pellets and recycle them for manufacture into oxide fuels for use in AGRs.

The CEBG announced their intention of extending the life of the Magnox power stations to 30 years with a consequent requirement for further fuel. This coincided with the major refurbishment of both Magnox and AGR lines at Springfields to maintain their efficiency and competitiveness.

Left) Pond 5, Sellafield.
Hinton House, Risley.
X-raying welds on Magnox fuel at Springfields.



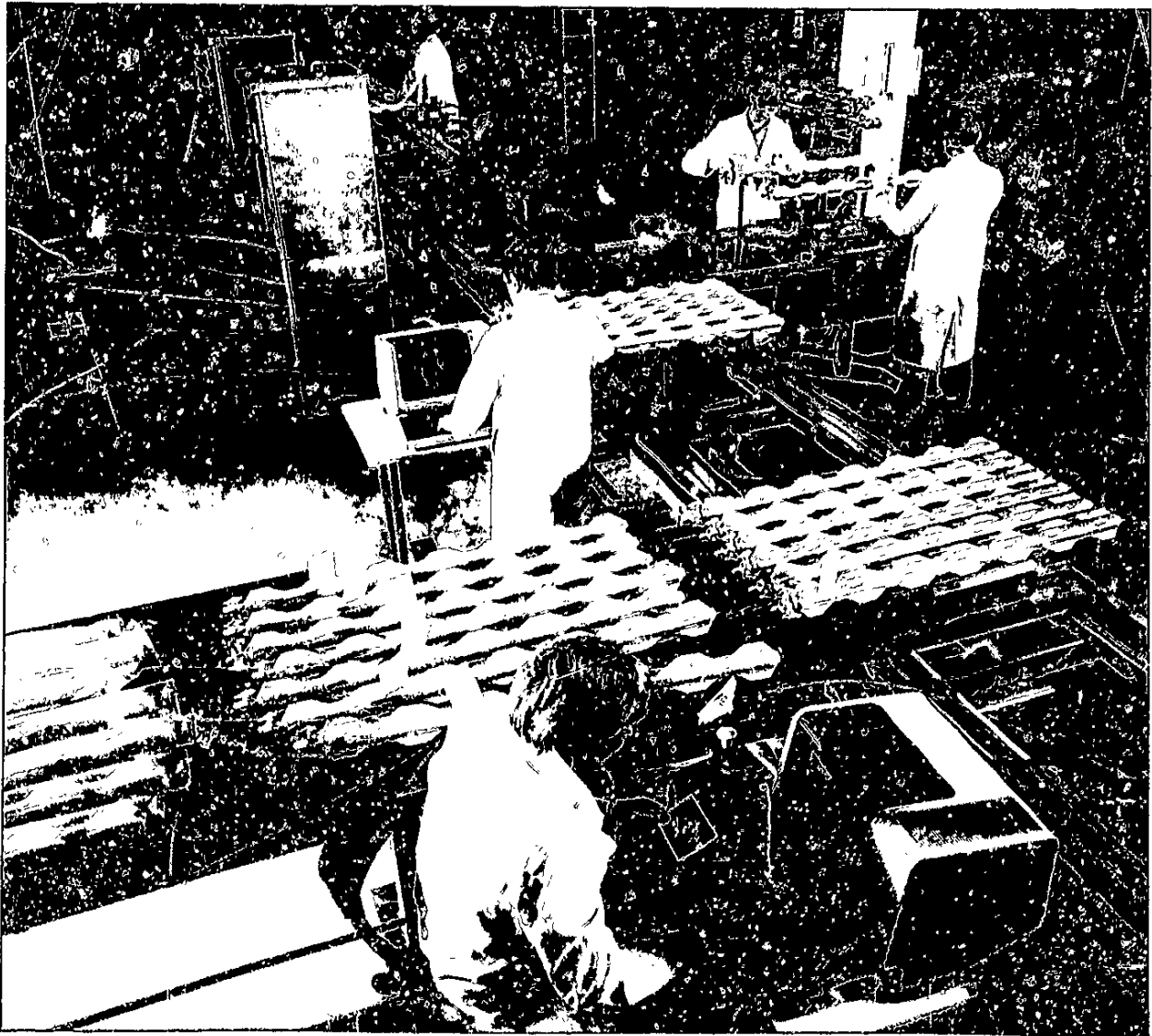
Fuel Manufacture

Uranium fuel is used in thermal nuclear power stations throughout the world. In Britain this fuel may be in the form of natural uranium for the Magnox power stations or enriched uranium for use in the more modern Advanced Gas-cooled Reactors. Both types of fuel are manufactured at BNFL's fuel fabrication plant at Springfields near Preston.

The uranium, which occurs widely in the earth's crust, arrives at Springfields from mines overseas as uranium ore concentrate. BNFL converts it into the highly purified form required for use in reactors and fabricates it into nuclear fuel.

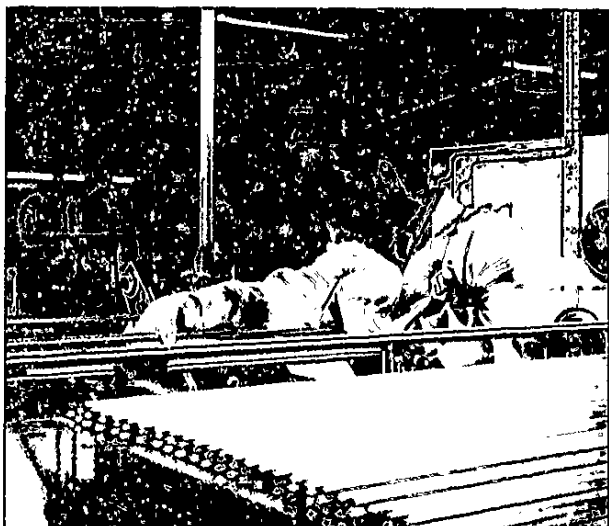
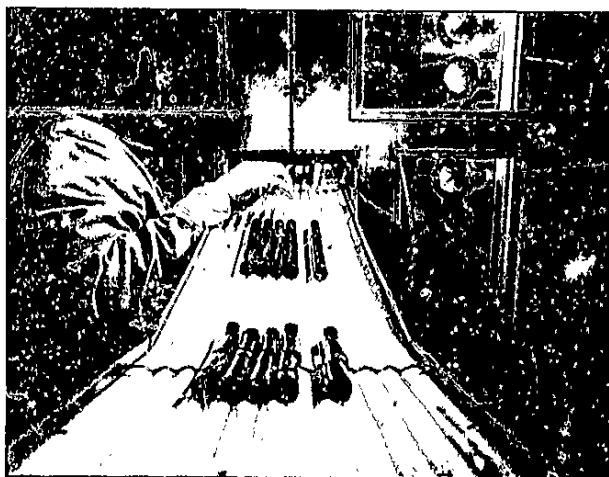
Modernisation of the Magnox production lines has included the introduction of computer-based technology. On the AGR lines, an improved design of fuel

Final inspection and packing of Magnox fuel.



assembly (Stage II) has been developed to improve the efficiency of reactor operations. The aim is to achieve full on-load refuelling of the reactor, compared with the present refuelling limit of about 30 per cent of full power. Production levels have been boosted by the initial fuel charges for the new stations at Heysham and Torness which will use the Stage II fuel, manufactured on a new robotic welding line.

A significant expansion of light water reactor (LWR) fuel fabrication capability is under way at Springfields. A canning and assembly plant using technology licensed from Westinghouse has been commissioned and additional pelleting capacity is being installed.

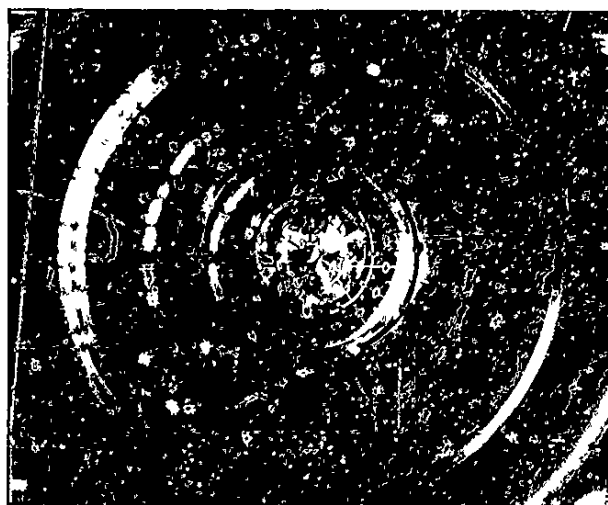


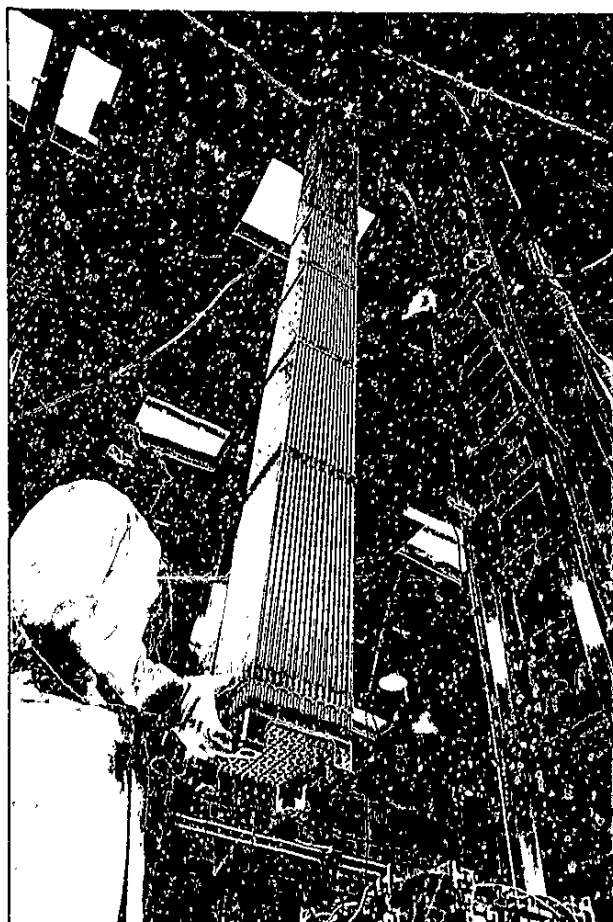
Left) AGR fuel pellets.

Inspection during canning of AGR fuel

Below) Robotic spot welding line.

Inspection of AGR Stage II fuel cage

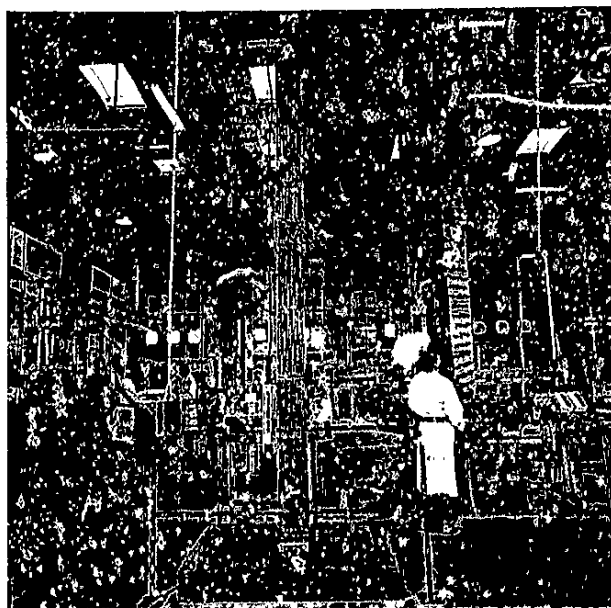




Prospects for PWR fuel manufacturing business for BNFL must depend on whether a home market develops for the fuel and on the Company's ability to compete effectively against well-established overseas rivals. Given the establishment of a suitable home base, however, BNFL believes it will in time be able to achieve full competitiveness.

Springfields has already produced fuel for stations in Europe, Japan and the USA. Thousands of tonnes of uranium oxide powder have been exported and BNFL has also built up a substantial market for the conversion of ore to uranium hexafluoride.

Export business in uranium hexafluoride, uranium oxide powder and pellets has continued to stand up well in spite of the continuing depressed state of the world market. During 1985 new business was obtained in many countries including the USA, France, West Germany, Spain, Italy and Japan. Orders for sales of Fuel Division services and technology are now approximately £100 million.



More than 5,500 tonnes of oxide powder have now been produced by the Integrated Dry Route (IDR)—a single stage process for the conversion of uranium hexafluoride to uranium dioxide powder. The process, which was developed at Springfields, has in recent years been licensed to major European and American fuel fabricators and Springfields' staff have been involved this year in training American operators.

Left) One of the final measurement checks in PWR fuel assembly.

Final assembly area for PWR fuel.

Enrichment

Natural uranium consists of two main isotopes—uranium 235 and uranium 238 in the ratio one to 140. Uranium 235 is the fissile isotope on which the nuclear chain reaction depends. In oxide fuels used in AGRs and LWRs the proportion of this isotope is increased, making them more efficient and giving a more economic use of uranium.

This process of increasing the ratio of uranium 235 to uranium 238—the enrichment process—together with supporting research and development has been carried out at Capenhurst for more than 30 years, with Capenhurst always at the forefront of enrichment technology.

BNFL was one of the first organisations to develop centrifuge technology for uranium enrichment on an industrial scale. Gaseous uranium hexafluoride is spun at very high speeds in the centrifuges. In each machine the uranium 235 tends to collect near the centre and the heavier uranium 238 near the wall. The two streams of uranium hexafluoride are drawn off and the separation process is repeated through a series of centrifuges until the required enrichment is achieved.

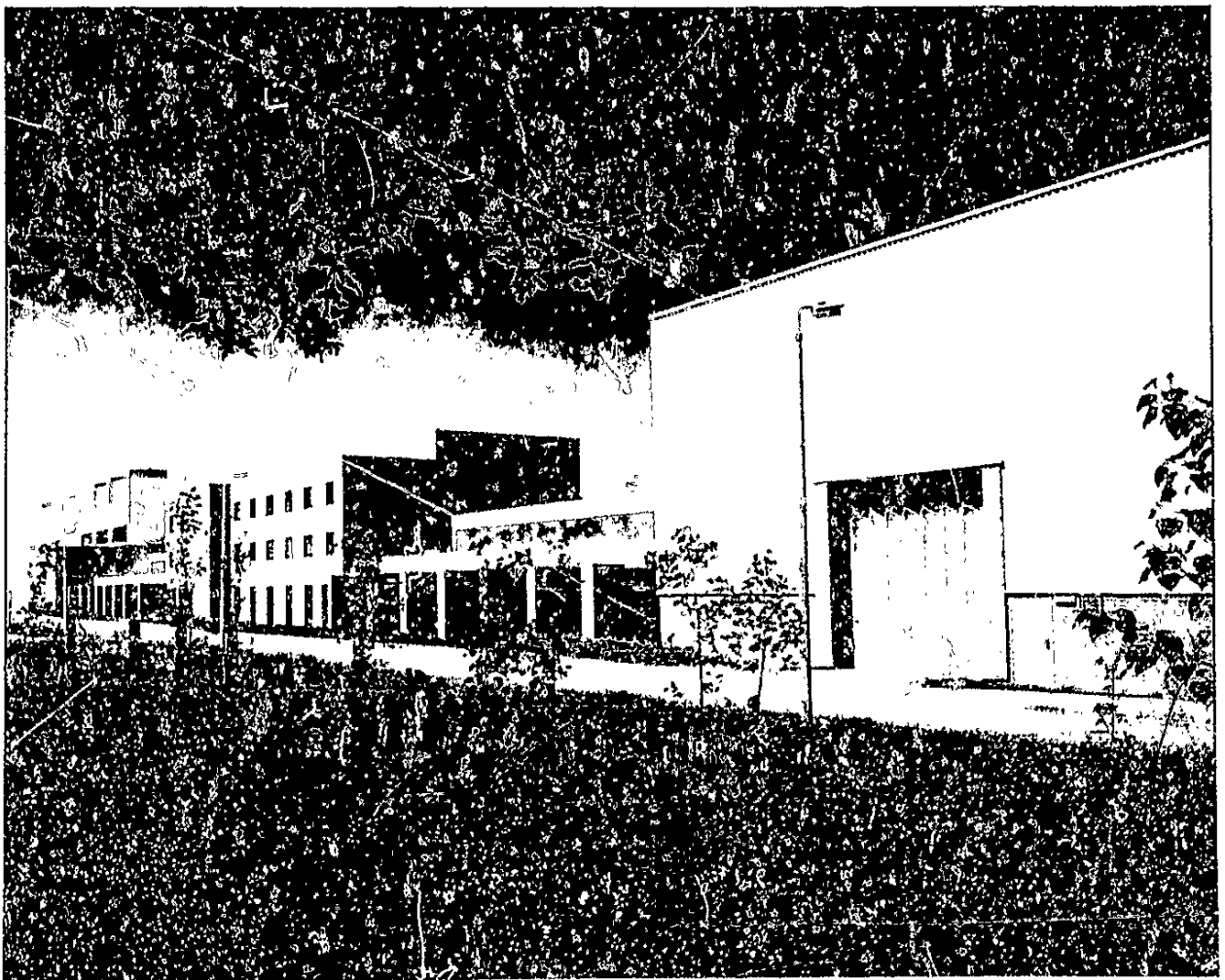
The first commercial enrichment plant using centrifuges began operation at Capenhurst in 1977; a second similar plant was commissioned by late 1983.

The performance of these plants has been excellent. Construction and commissioning of a third plant, using a more advanced design of centrifuge, is underway. A fourth plant, incorporating further improvements in centrifuge design, is scheduled to be commissioned in stages between 1987 and 1990. A substantial part of the manufacture of the centrifuges is carried out at Capenhurst, where they are all assembled.

BNFL's civil enrichment work is carried out in collaboration with industrial partners from West Germany and the Netherlands. The enterprise, known as Urenco, was established in 1970 and embraces development, design and construction of the plants and the marketing of the product.

Urenco made a significant breakthrough in the enrichment market during 1984 by winning its first contract in the USA. This is to provide long-term

Centrifuge plant at the Capenhurst works.



enrichment services for Boston Edison's Pilgrim 1 station. Further contracts were secured with Swedish and German utilities, one of the Swedish contracts being amongst the largest ever awarded to Urenco. The value of contracts negotiated by Urenco in 1984/85, in the face of stiff international competition, was £450 million at current prices. The total value of enrichment services contracts now secured by Urenco is about £2600 million.

Construction has continued on the separate facility at Capenhurst to be used for providing enrichment services to the Ministry of Defence under a BNFL/ MoD contract. The value of this contract, when added to BNFL's share of the Urenco business, takes the total value for Capenhurst enrichment to over £1000 million.

The work of dismantling the old diffusion plant, which for economic reasons relating to its high energy consumption, was shut down in 1982, has continued. Part of the area previously occupied by this plant is designated for the further enrichment plant capacity required to meet the Capenhurst share of future Urenco sales through the 1990s.

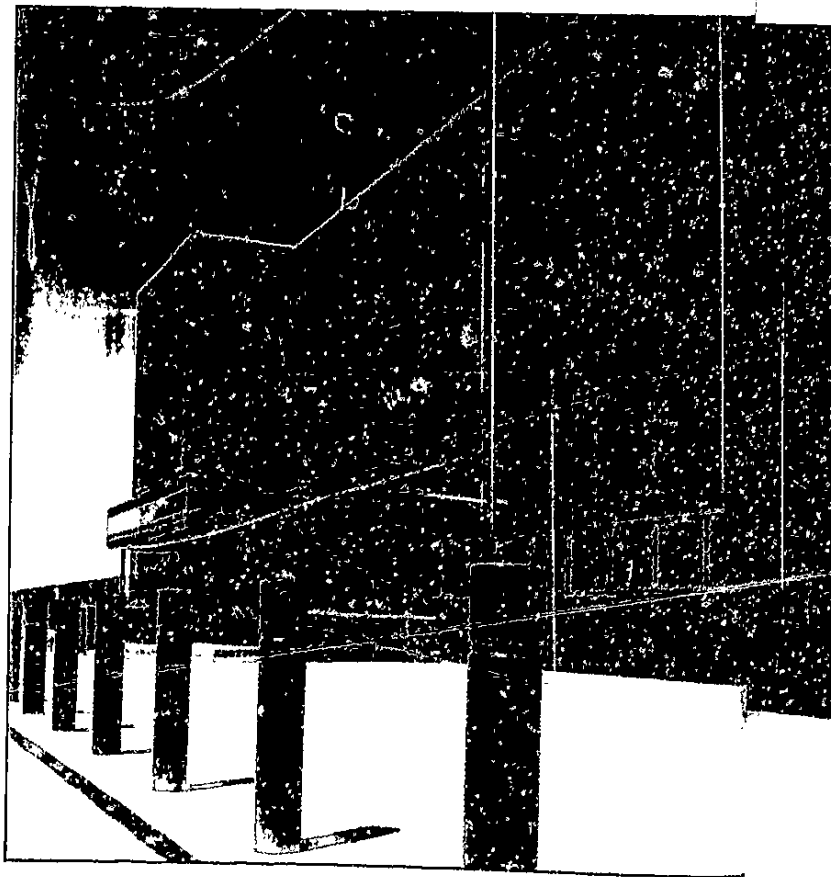


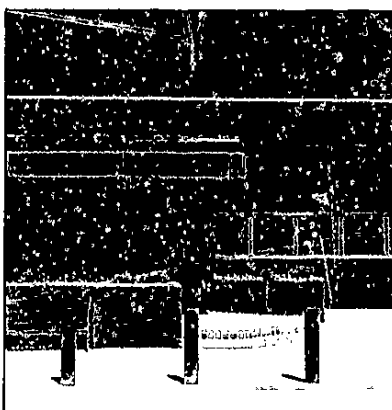
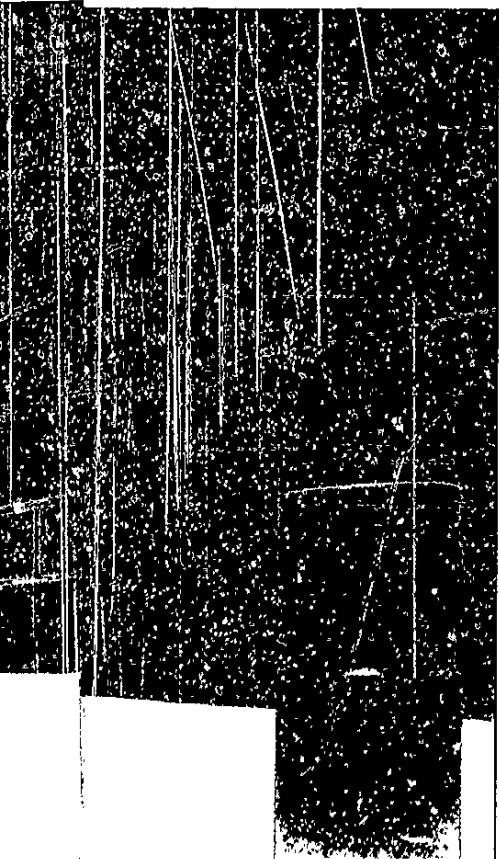
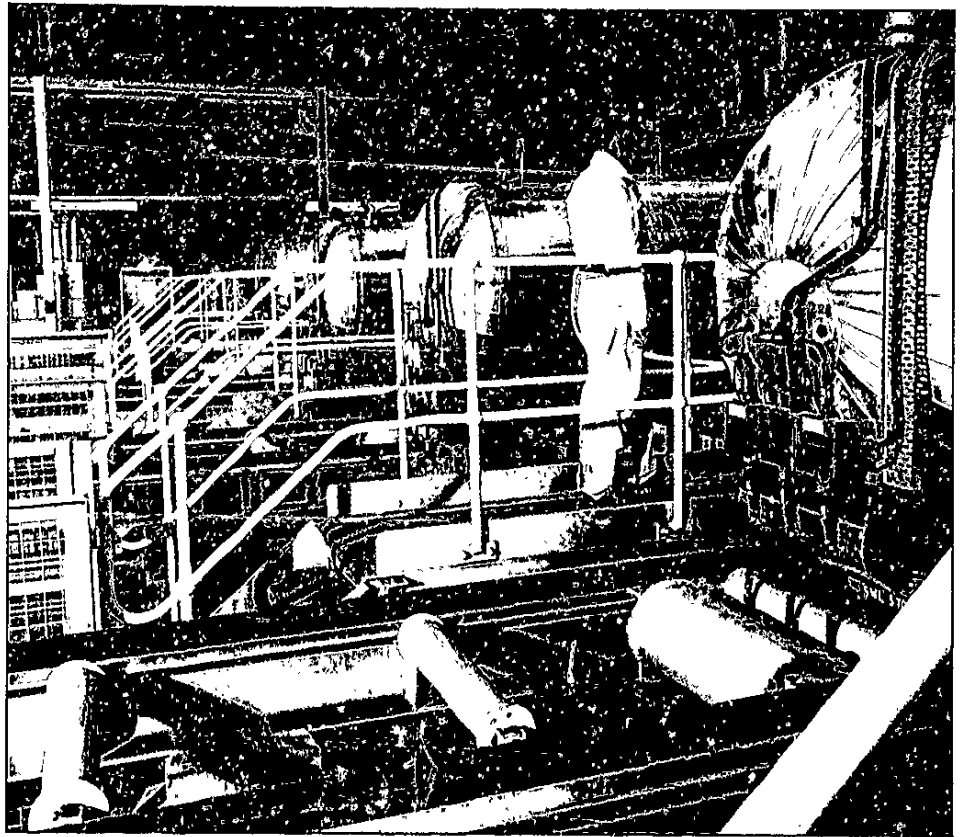
Above) Centrifuge cascade.

Centre top) Handling facilities for uranium hexafluoride.

Top right) Product container sampling facilities.

Right) One of the modern enrichment plants.





Reprocessing Operations

Reprocessing of irradiated nuclear fuel allows valuable uranium and plutonium to be reclaimed and the waste products (representing only between one per cent and three per cent of the total weight) to be separated for safe storage and ultimate disposal. During more than 30 years of operations at Sellafield over 25,000 tonnes of Magnox fuel have been reprocessed. The fuel is stored underwater for cooling and radioactive decay before the outer cladding is removed and the bare fuel bar dissolved in nitric acid for separation into different streams.

The recovered uranium can be returned to the customer, stored, or sent to fuel fabrication plants for re-use. Eighty per cent of the AGR fuel produced to date has used recycled uranium. Plutonium is made into fuel for use in the UKAEA's Prototype Fast Reactor at Dounreay, returned to the customer under international safeguards or stored for use in a future fast reactor programme or for use to replace enriched uranium in existing types of reactor. Highly-active waste is concentrated for further treatment and storage in specially constructed stainless steel tanks.

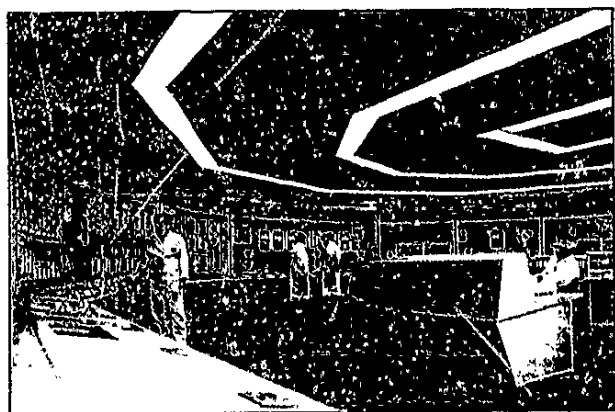
A vitrification plant which will convert the highly-active waste into a glass-like form is under construction at Sellafield and is due to be commissioned in 1989. Meanwhile a full-scale inactive plant has been constructed to develop operational techniques and provide advance training for operators.

At Sellafield less than 0.1 per cent of the total waste arising from reprocessing operations is discharged—to sea and to the atmosphere. These

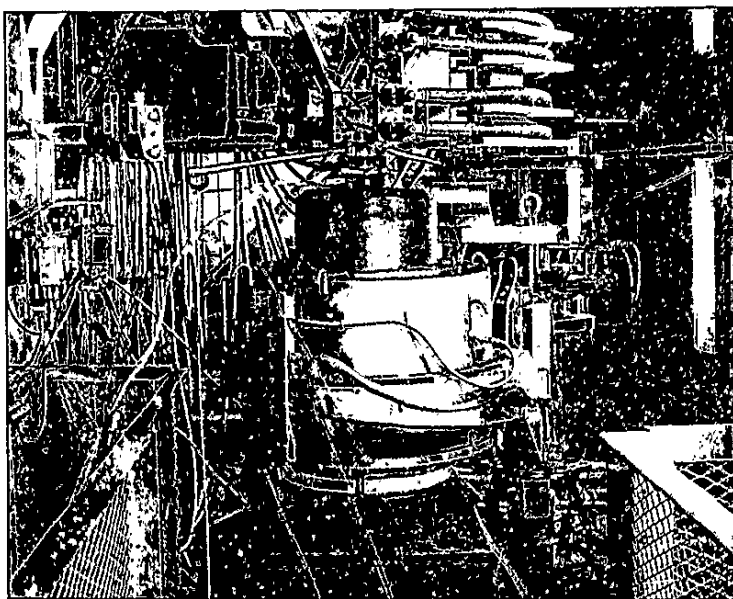
discharges are subject to a certificate of authorisation by the Department of the Environment and the Ministry of Agriculture, Fisheries and Food. From the beginning of 1985, a variation in the authorisation of liquid discharges was introduced which includes a reduction in authorised annual limits.

Under the latest project for further discharge reduction, substantial additional effluent treatment and storage plant will be constructed which will cut total liquid discharges from Sellafield, notably of long-lived alpha radiation emitters, which will be cut to a target of less than 20 curies a year compared with some 370 curies in 1984. Beta emitters will be reduced to 8000 curies a year compared with some 32000 in 1984. The reduction of radioactive discharges to the sea has been a continuing success story over the last ten years. SIXEP and other plant included in an earlier £190 million programme will further reduce discharges of both alpha and beta emitters.

Only fuel from the Magnox power stations is

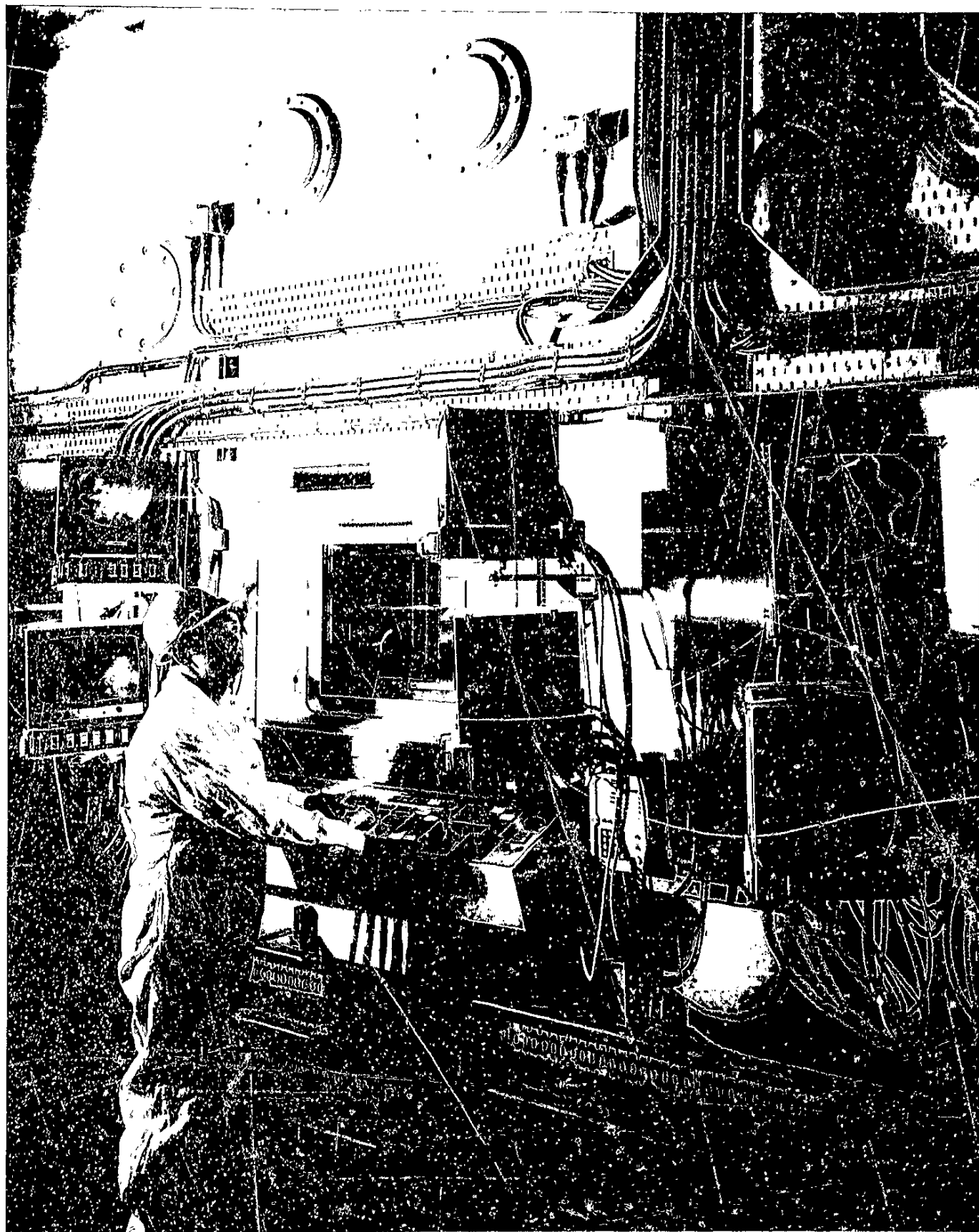


Above) Control room of the SIXEP plant which was commissioned during the year.
Vitrification pilot plant.
The new calibration suite at Sellafield.



Right) An operator at one of the inlet cells in Pond 5.







reprocessed at present, although oxide fuel has been reprocessed on a small scale in the past on a demonstration basis. Uranium oxide fuel will be reprocessed in the Thermal Oxide Reprocessing Plant (THORP), planned to be operational by 1990. Reprocessing of AGR fuel from the UK electricity boards and light water reactor fuel from customers in Europe and Japan will comprise the 6000 tonnes of throughput for the first ten years of operation.

Sellafield is the largest of BNFL's sites employing about 6000 people with an additional 500 working for UKAEA and some 3000 employed by contractors engaged on construction work.

New facilities opened during the year included a graphite workshop on the Lillyhall Industrial Estate near Workington, the main production being fuel element components for AGRs and Magnox reactors. A new changerooms complex includes the latest radiation monitoring equipment and a new engineering workshop replaces a number of small workshops providing improved facilities in areas such as maintenance of radiation monitoring equipment, calibration of instruments and industrial radiography, machine shops and fabrication facilities.

Calder Hall power station provided the first nuclear generated electricity to the national grid in 1956 and was the first industrial-scale nuclear power station in the world. Chapelcross, which started operating in 1959, celebrated its 25th anniversary during the year. Both stations have operated well and there is no known reason why they should not continue to operate into the 1990s. Total generation is now over 87,000 million kWh, equivalent to the electricity which could be obtained from about 43 million tonnes of coal.



Chapelcross power station
The graphite workshop at Lillyhall

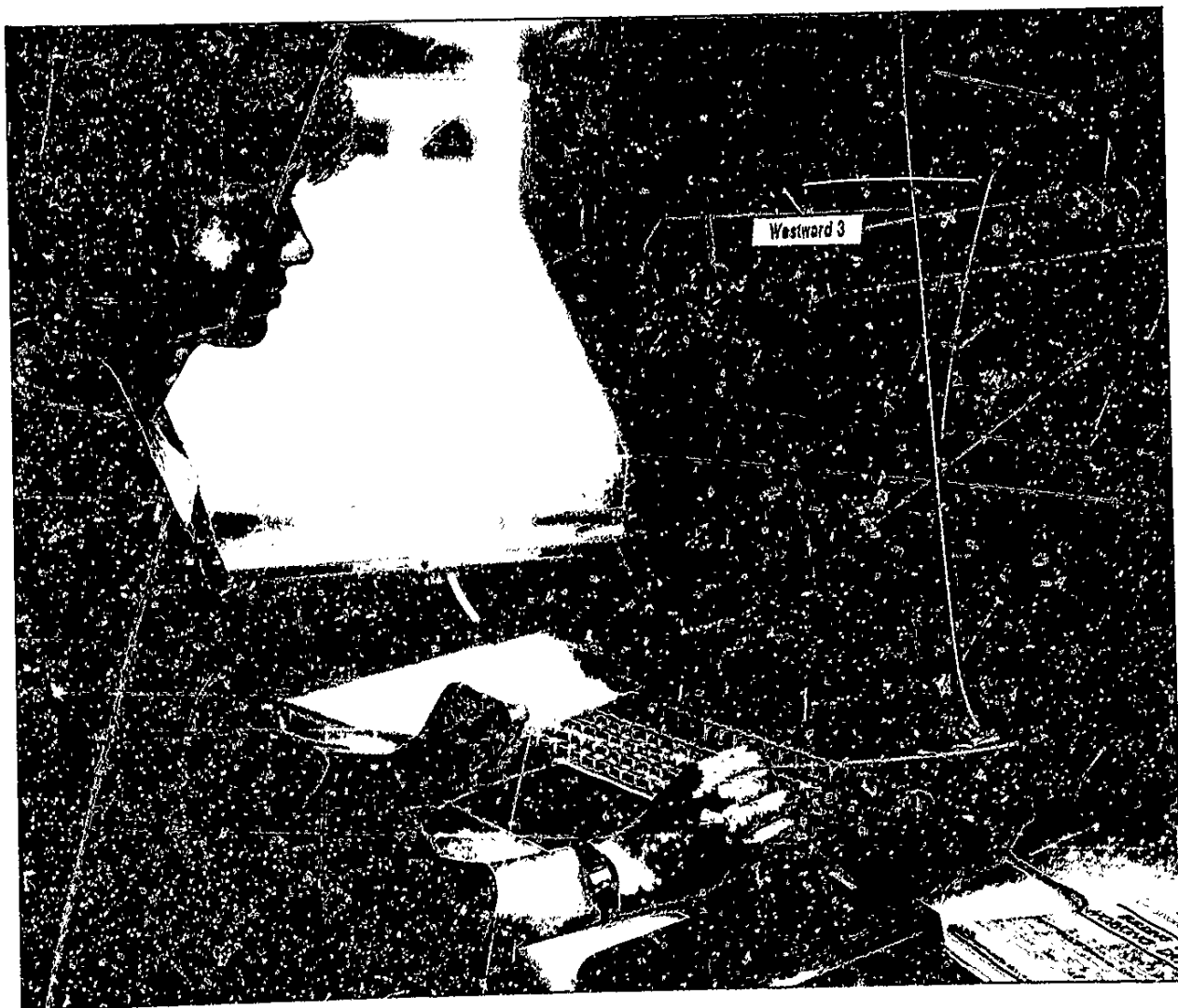
Reprocessing Engineering

A major capital investment programme is underway at Sellafield involving expenditure of some £2500 million on reprocessing and waste management plant over the next 10 years. The design and project management responsibilities for this programme rest with the Reprocessing Engineering Division.

This Division, employing directly about 1200 staff, together with a further 1000 design contract staff mainly from major engineering companies in the UK, is based at Risley and incorporates the complete range of engineering disciplines required to design process plants and to manage the construction projects.

Modern techniques used in the design and project management activities include extensive use of computer-based systems. All activities, including design, manufacturing and construction are subject to Quality Assurance inspection, to ensure that high standards are maintained.

A draughtswoman at Risley utilising computer-aided design.

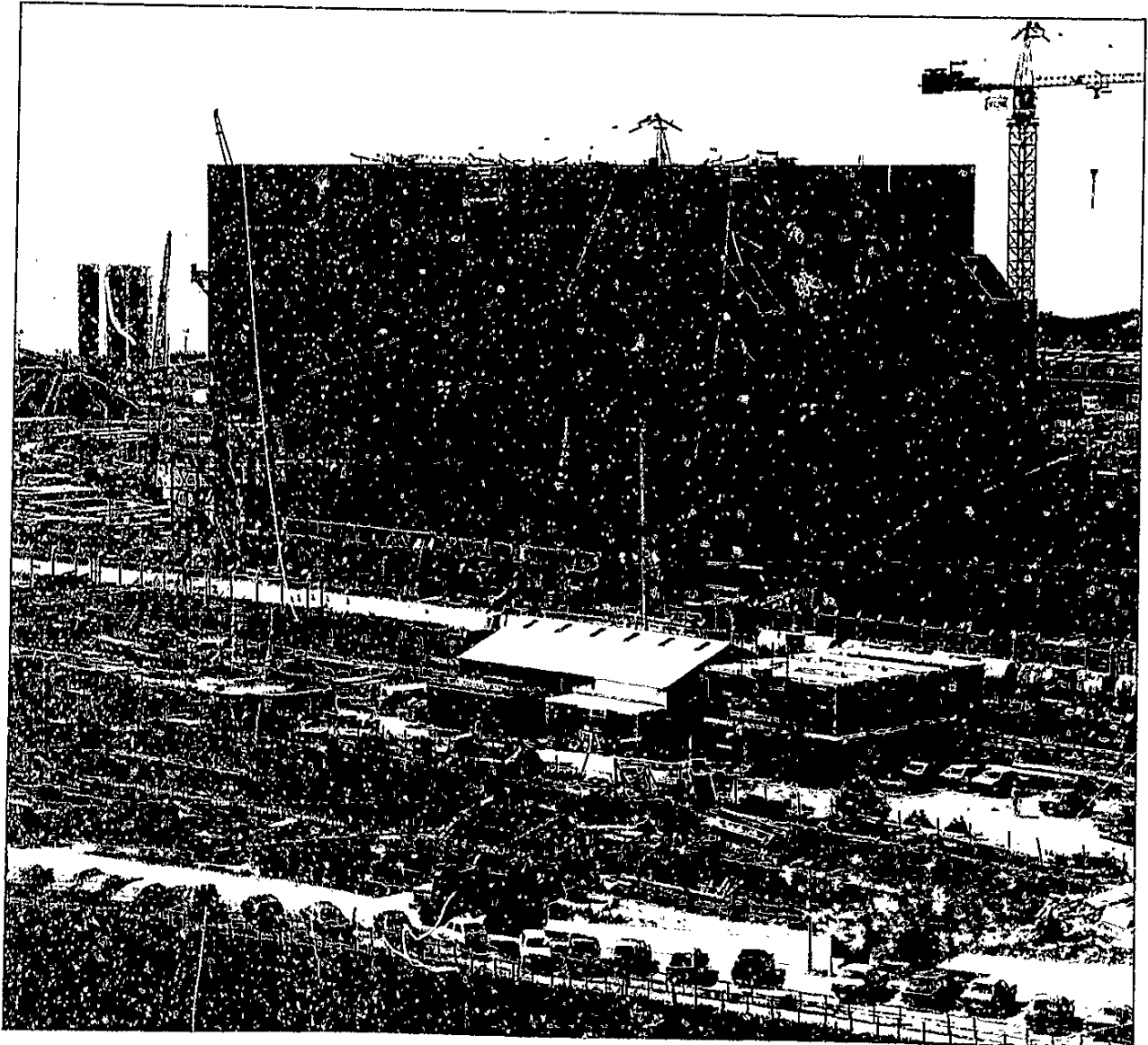


By far the largest project being undertaken is the £1300 million Thermal Oxide Reprocessing Plant (THORP). The plant is designed to reprocess spent oxide fuel, both from the UK's Advanced Gas-cooled Reactors and from overseas. Construction of the fuel receipt and storage facility is well underway and the civil engineering contract for the Head End and Chemical Separation Plant was awarded at the end of the financial year.

Other projects for which design and engineering services are being provided include the vitrification plant, due to come into operation in 1989, which will convert the highly-active liquid waste from reprocessing to a glass-like form for eventual long-term storage.

During the process the highly-active waste is evaporated and dried to a powder form before being mixed with glass-making materials and heated in a

Construction of THORP.



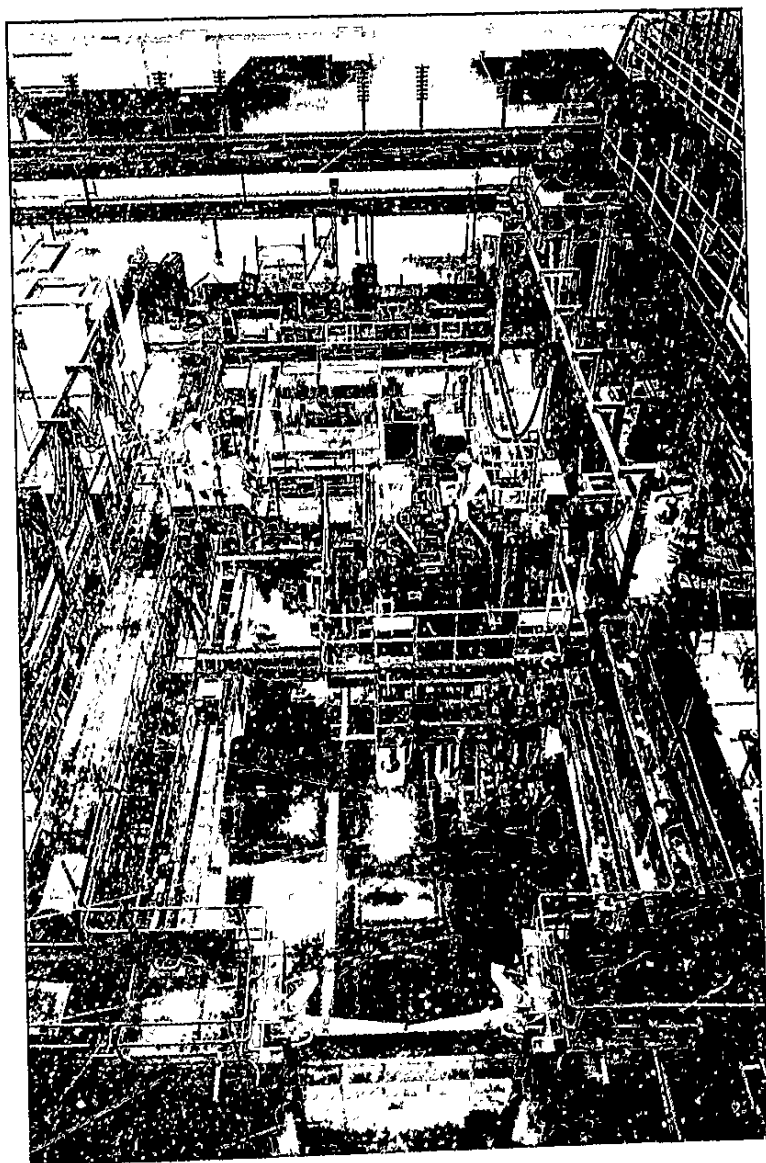
furnace. The molten glass, incorporating the waste, is cast into a container, fitted with a lid and sealed by automatic fusion welding. The containers may be stored in an air-cooled store for at least 50 years, to allow heat generation and radiation levels to reduce and thereby facilitate eventual disposal.

Engineering staff in the division are also working on designs for plants to encapsulate intermediate level solid wastes at present stored in silos. These include cladding material stripped from Magnox elements before reprocessing, sludges from various storage ponds, spent ion exchange material from SIXEP and solid waste from THORP. The first encapsulation plant, construction of which has started, is programmed for operation in 1989.

Pond 5, one of the biggest construction projects ever undertaken at Sellafield is now being handed over

for commissioning. It will provide fuel receipt, storage and decanning facilities and is primarily intended to increase the storage capacity and throughput of spent Magnox fuel for reprocessing although it also has facilities to deal with AGR fuel—the first building to accept both types. Emphasis has been given to the control of fuel corrosion and there are improved methods of decontaminating and remotely maintaining equipment.

Reprocessing Engineering Division has a very heavy workload, designing highly complex, technically advanced and costly projects crucial to the Company's future. As well as meeting technical requirements, they must ensure that these projects are completed on schedule and within the budget and that they meet the exacting safety requirements of the Nuclear Installations Inspectorate.



Left: Pond 5 during commissioning.
Vitrification plant under construction.

Hinton House

Hinton House, BNFL's new head office and engineering design centre represents one of the largest concentrations of engineering design expertise in Europe, the design engineers for the Company's major capital projects having been brought together under one roof. Previously they were dispersed over several buildings on the Risley site.

An ideal environment has been created with nearly three miles of windows to maximise natural light and an unusual uplighter system providing high quality lighting for drawing board users. The system was developed following extensive tests and trials and is partially controlled by an automatic switching system linked to solar detectors so that artificial lighting can be turned off when natural light levels are sufficiently high.

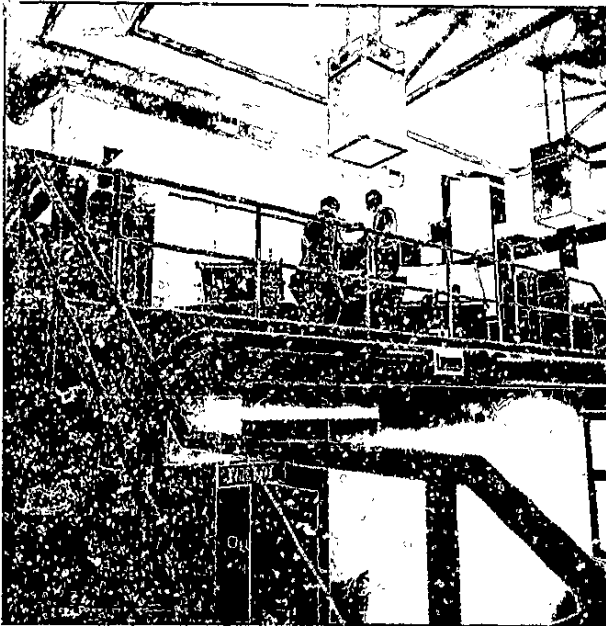
The building varies in height from one to four storeys. Single and two storey sections on one side relate to the domestic scale of nearby housing and

three and four storey sections on the other relate to the larger scale office buildings of the UKAEA and Birchwood Science Park.

Inside, the space is open plan, enabling office layouts to be altered providing for continuous variations in the size of project groups. Service grids, air circulation and heating systems have been co-ordinated to enhance this flexibility.

The importance of computer-based engineering was recognised in the specially designed and controlled computer suite and data communications installation which has equipment to handle 1000 computer terminals. The advanced system housed here will eventually become the centre of all BNFL's inter-site and on-site communications.

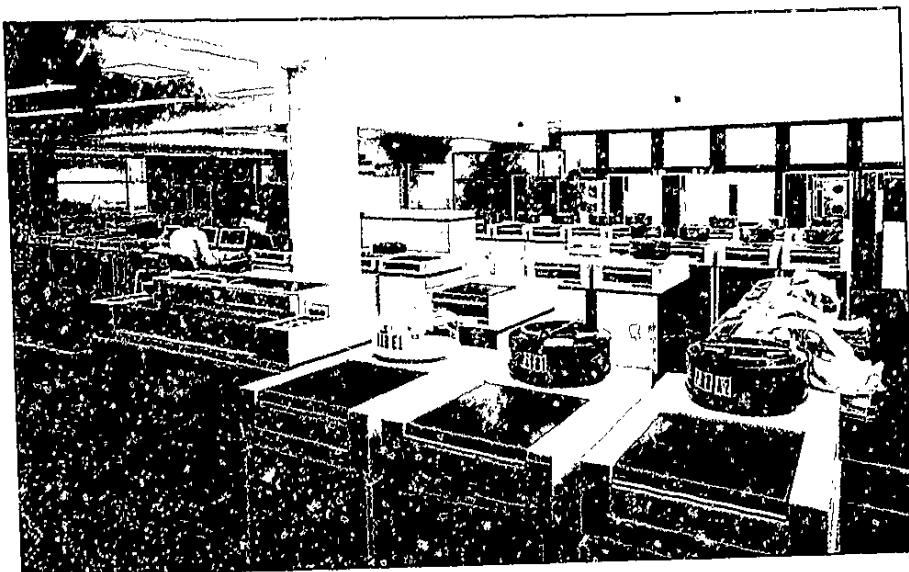
Also at Risley are staff dealing with planning and commercial activities, finance, personnel and administration, health and safety and information services.



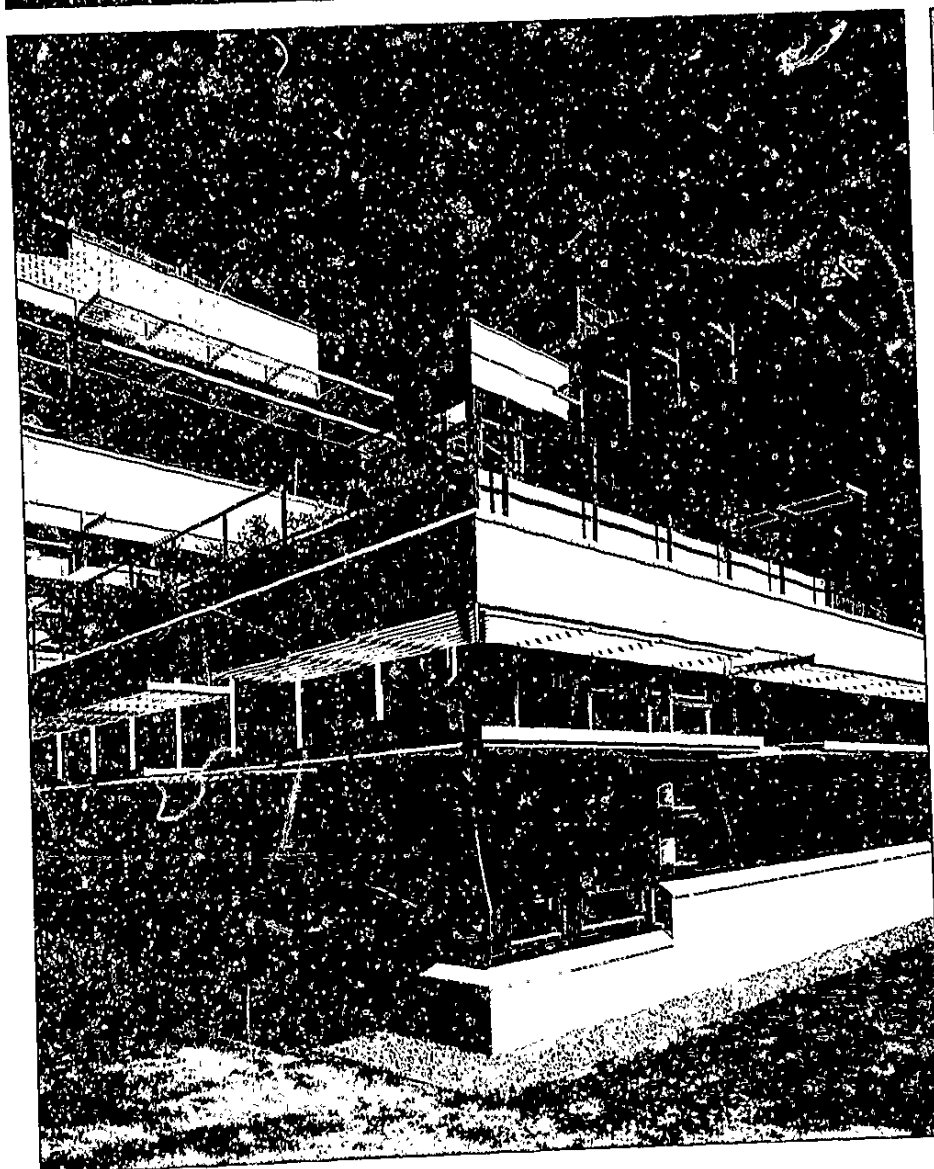
One of the step-down roof areas.
Main entrance.



Philip Myers, assistant chief structural engineer discusses a model of THORP with the Rt Hon Peter Walker MP, Secretary of State for Energy and Consumer Affairs.



Computer suite



Transport

All stages of the nuclear fuel cycle involve the transport of nuclear materials such as uranium ore, uranium hexafluoride, new fuel and spent fuel. Stringent precautions are taken to ensure the safety of workers and the general public, as the outstanding safety record of nuclear transport operations over 30 years demonstrates.

The heavily shielded containers, known as flasks, used in the transport of spent fuel from power stations to reprocessing plant, weigh up to 100 tonnes and are made of steel or steel and lead with walls about one foot thick. The designs comply with regulations laid down by the International Atomic Energy Agency and are rigorously tested by calculation, scale-model or full-size testing. The Department of Transport must be satisfied that flasks meet the regulations before an approval certificate can be issued.

Over 7000 flask journeys of spent fuel have been made from UK nuclear power stations to Sellafield without any accident involving any damage to a flask.

The safety of this type of transport was proved still further during 1984 with the series of full-scale flask tests organised by the CEBG. A flask was dropped from a height of nine metres to demonstrate that predictions from earlier scale model tests were correct. But the CEBG went a stage further and organised a crash of a flask with the heaviest type of diesel locomotive used by British Rail and three passenger carriages travelling at 100 mph. The locomotive was started using remote controls and gathered speed over about eight miles of track to an impact speed resulting in it having greater momentum and kinetic energy than any other locomotive, including a High Speed Train at 125 mph.

The crash was arranged so that the train struck the joint between the flask body and the lid—potentially

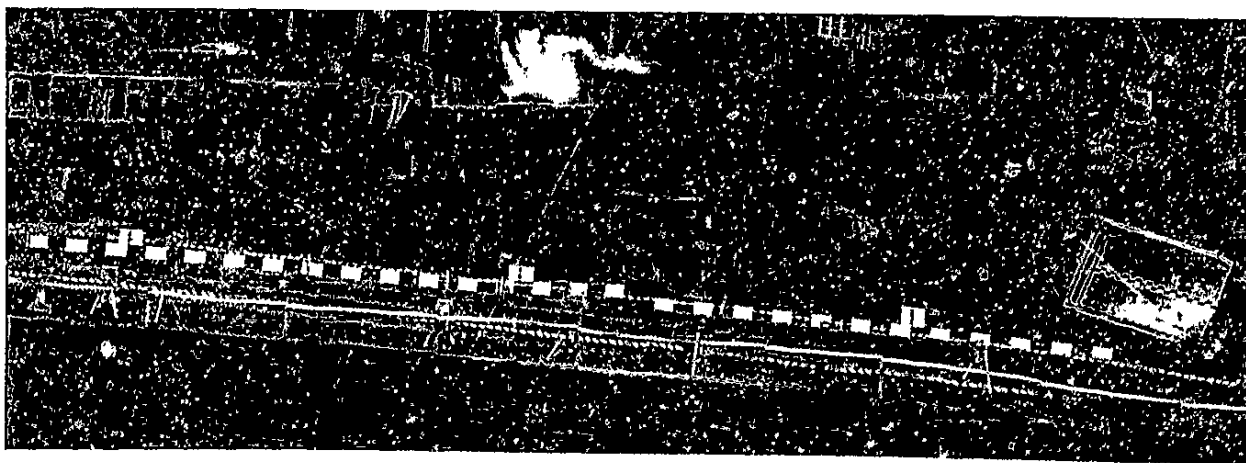
the most vulnerable part. After impact the locomotive was crushed and the carriages badly damaged but the nuclear fuel flask was completely intact.

BNFL has now had 20 years' experience in the safe transport of spent fuel by sea, covering more than 1200 flasks of fuel through the port of Barrow, where it has a purpose-built terminal.

Its main involvement in transport operations is through its subsidiary—Pacific Nuclear Transport Limited (PNTL). This company was established in 1975 and BNFL owns 62½ per cent of the shares. PNTL is responsible for transporting spent fuel from Japan to Sellafield and Cap de la Hague in France and its ships have now travelled more than one and a half million nautical miles with flasks on board. During the year PNTL delivered over 340 tonnes of spent oxide fuel to Sellafield and Cap de la Hague and also took delivery of 12 new transport flasks.

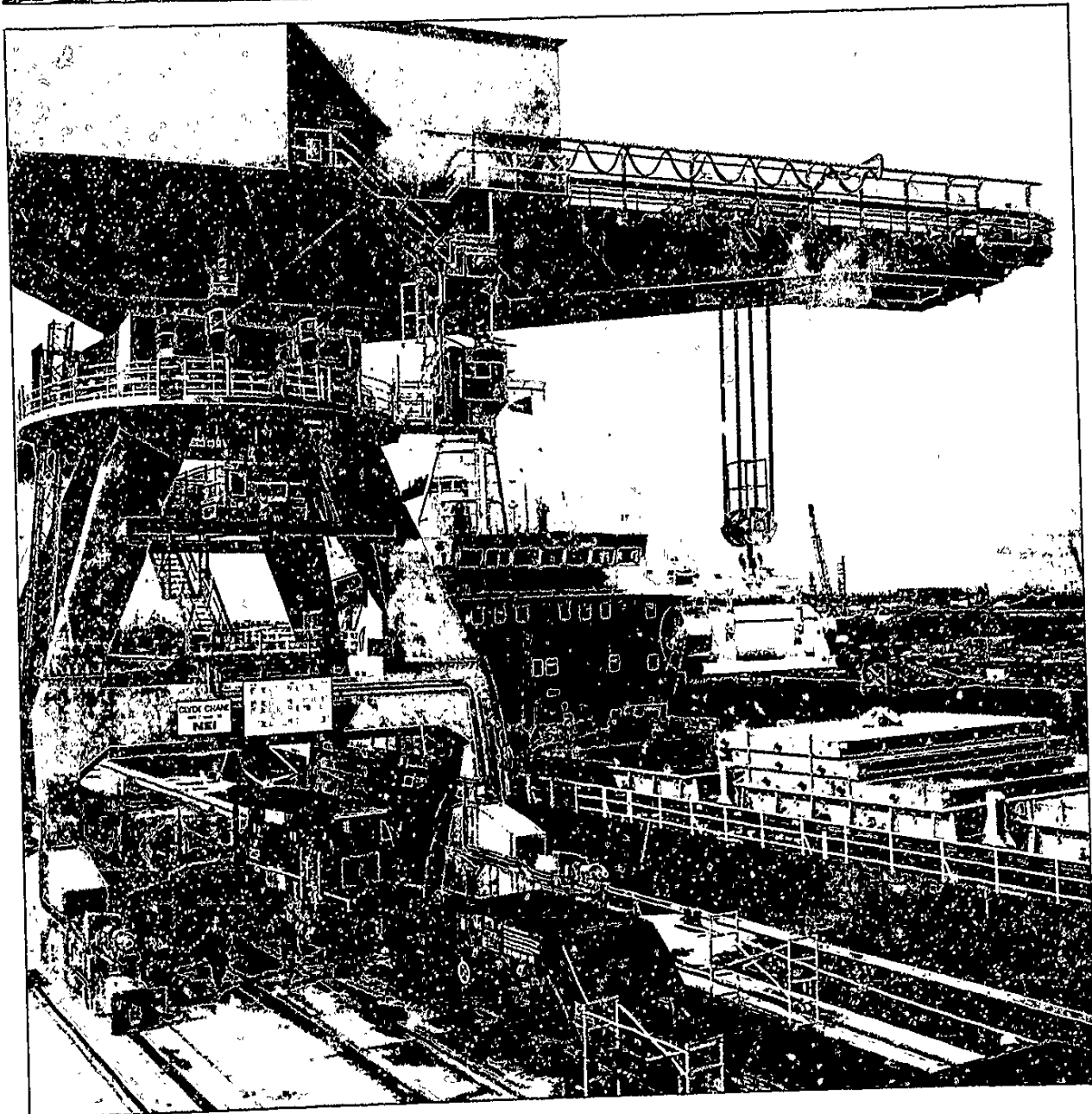
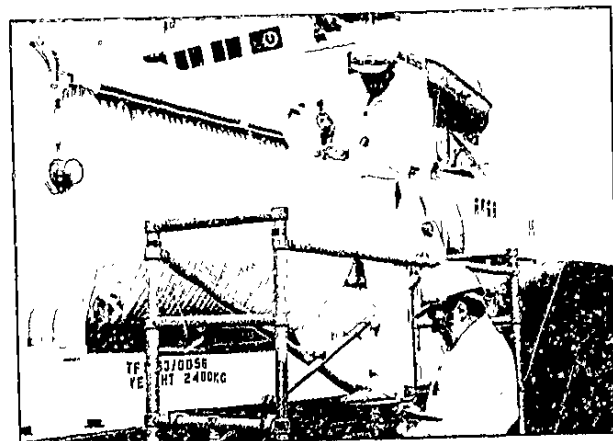
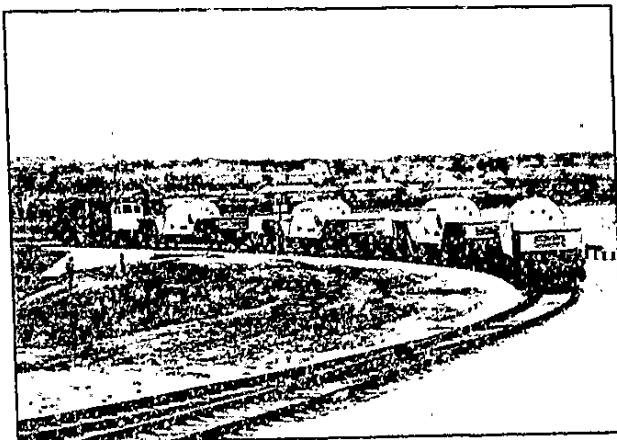
PNTL operates four specially designed or adapted nuclear fuel carriers, each with a nominal deadweight of 3000 tons and incorporating a number of special safety features. The latest of these ships was built in North Devon by Appledore Shipbuilders and added to the fleet during 1985, replacing an older chartered vessel.

BNFL itself owns and operates a purpose-built ship, the Mediterranean Shearwater, for the transport of spent fuel from European reactors which, since its introduction in 1982, has travelled in excess of 55,200 nautical miles. BNFL also has a 33½ per cent shareholding in Nuclear Transport Limited which is responsible for spent fuel movements from European oxide-fuelled power reactors to Sellafield and Cap de la Hague in France. During the year NTL delivered some 240 tonnes of spent oxide fuel to the two reprocessing plants.



CEBG crash test

Right) Transporting spent fuel by rail.
Monitoring a flask at the Barrow terminal.
Unloading fuel flasks from "Pacific Teal".



Health and Safety

The Company has benefited from more than 30 years' experience of working with radioactive materials which has led to a high degree of safety. The Company keeps well within the authorised limits of operation to ensure that this remains the case, and in addition, it aims to keep any hazard as low as is reasonably practicable.

Company health and safety assurance arrangements include safety and medical departments at each operating site. These advise local management and undertake monitoring and investigations to confirm that safety and environmental protection arrangements are satisfactory.

BNFL's operating sites are licensed by the Nuclear Installations Inspectorate in accordance with the

Nuclear Installations Act. These licences are substantial documents running to hundreds of requirements and conditions designed to safeguard workers and the general public. Radioactive discharges to the Environment are authorised by the Ministry of Agriculture, Fisheries and Food and the Department of the Environment in England or the Scottish Office in Scotland. Under the Radioactive Substances Act, these authorisations impose a number of limits and conditions to safeguard the environment. The radiation protection arrangements incorporated in these licences and authorisations are based on the recommendations of the International Commission on Radiological Protection as endorsed by the National Radiological Protection Board.



Many factors combine to achieve a safe environment both on and around each operating site. These include careful design of plant, with shielding and containment to reduce radiation exposure and with safety systems to protect people and plant; plant operating procedures designed to minimise radiation exposure and achieve incident free work; monitoring of the workplace to ensure that all radiation protection features are effective and are being correctly used; monitoring of people to give additional assurance that radiation exposure of individuals is below the regulatory limits; monitoring of the amount of radioactivity discharged to the environment and monitoring of the environment outside the sites involving many

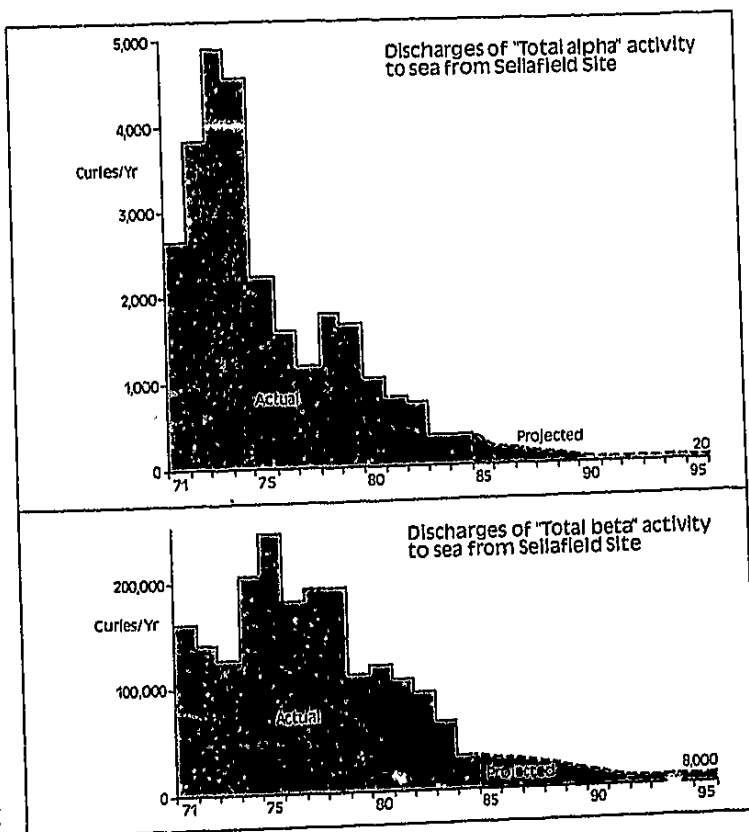
thousands of samples a year including the air, the sea, rivers, beaches, estuaries, land, seaweed, sea foods, milk and other foodstuffs.

Inspectors from the Nuclear Installations Inspectorate and Government Authorising Departments visit sites regularly. Authorising Departments arrange for independent samples and analyses for the monitoring of the discharges and the environment. The NII and Authorising Departments also examine plant at the design and construction stage to ensure that they are satisfactory in respect of safety and waste management.

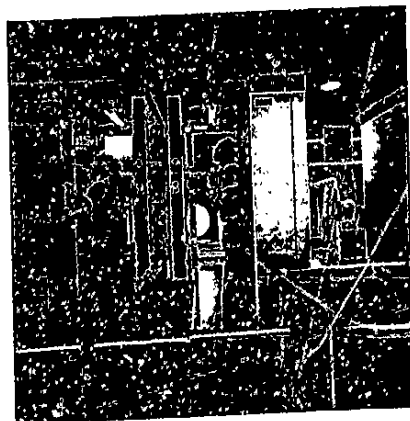
The Company publishes annual reports covering occupational safety, radioactive discharges and associated monitoring of the environment. The radiation exposure of the workforce, collectively, on average and in respect of the numbers most highly exposed, continued to reflect the declining trend of the last ten years. Average exposure levels have been below one tenth of the regulatory limit since 1980.

A study of mortality among BNFL workers covering a period of more than 30 years has concentrated on experience at Sellafield. The cancer rate is slightly less than would be expected from national statistics with no significant differences between radiation and non-radiation workers.

Discharges to the environment have also continued the trend of the last ten years. Alpha discharges, mainly plutonium, are now about one twelfth of the peak level and beta discharges, including caesium, are now about one seventh of the peak level. A £150 million project to reduce discharges still further was announced during the year so that by 1991 beta discharges will be reduced to a few per cent and alpha discharges to less than one per cent of peak levels.



Above) Collecting water samples for analysis.



Far left) Use of shielding in Pond 5.
Left) New changerooms at Sellafield.

Research and Development

Some £54 million was spent on Research and Development in 1984/85 including work directly in support of operating plants, work in support of the design of future plants and speculative work to maintain the Company's longer-term competitiveness.

By far the greatest effort is on reprocessing. The Reprocessing Operations Division has one of Britain's largest research and development departments directly associated with a production plant, costing £35 million last year. Much of this expenditure was devoted to radioactive waste management research including support for the encapsulation plants which will incorporate intermediate wastes into a concrete matrix for disposal. The vitrification process for highly-active liquid waste is another significant research and development activity. At Sellafield, a full-scale inactive vitrification plant including identical mechanical components to the final plant, allows the vitrification process to be tested under main plant conditions. Some £2 million was spent at Sellafield last year on this development work which also includes an evaluation of the properties of the vitrified product.

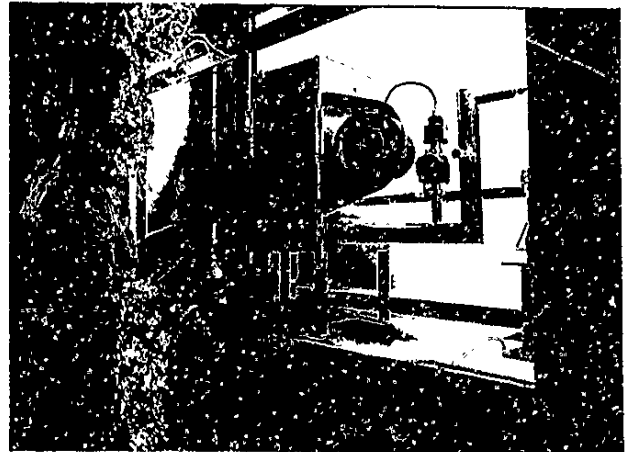
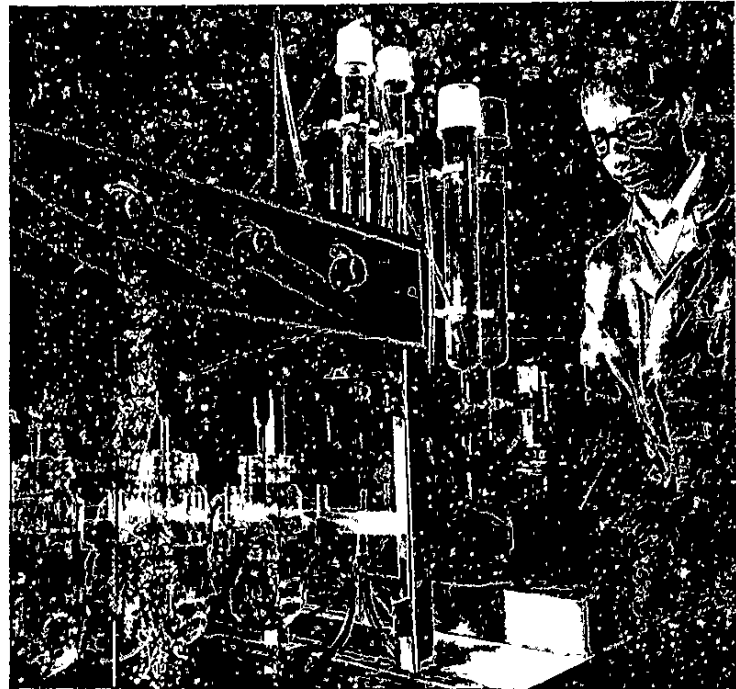
About £10 million was spent in 1984/85 on reprocessing development in support of THORP. Most of the work in this section is done at Sellafield. It incorporates a THORP miniature pilot plant which covers all parts of the production process. Four fully

active campaigns with irradiated fuel have now been completed, three during 1984/85. Major inactive rigs relating to THORP include the full-scale pulsed column test rig and a full-scale fuel shear machine which came into operation this year.

As well as work on specific projects, effort is also devoted to generic work including materials development, containment and ventilation and remote handling. This programme amounted to £6 million during 1984/85.

Work on future reprocessing projects is backed up by technical groups in Reprocessing Engineering Division at Risley where engineers and physicists have expertise in such areas as shielding design, criticality assessment, stress analysis and seismic analysis.

At Springfields the research and development



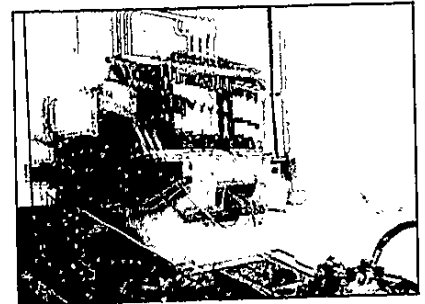
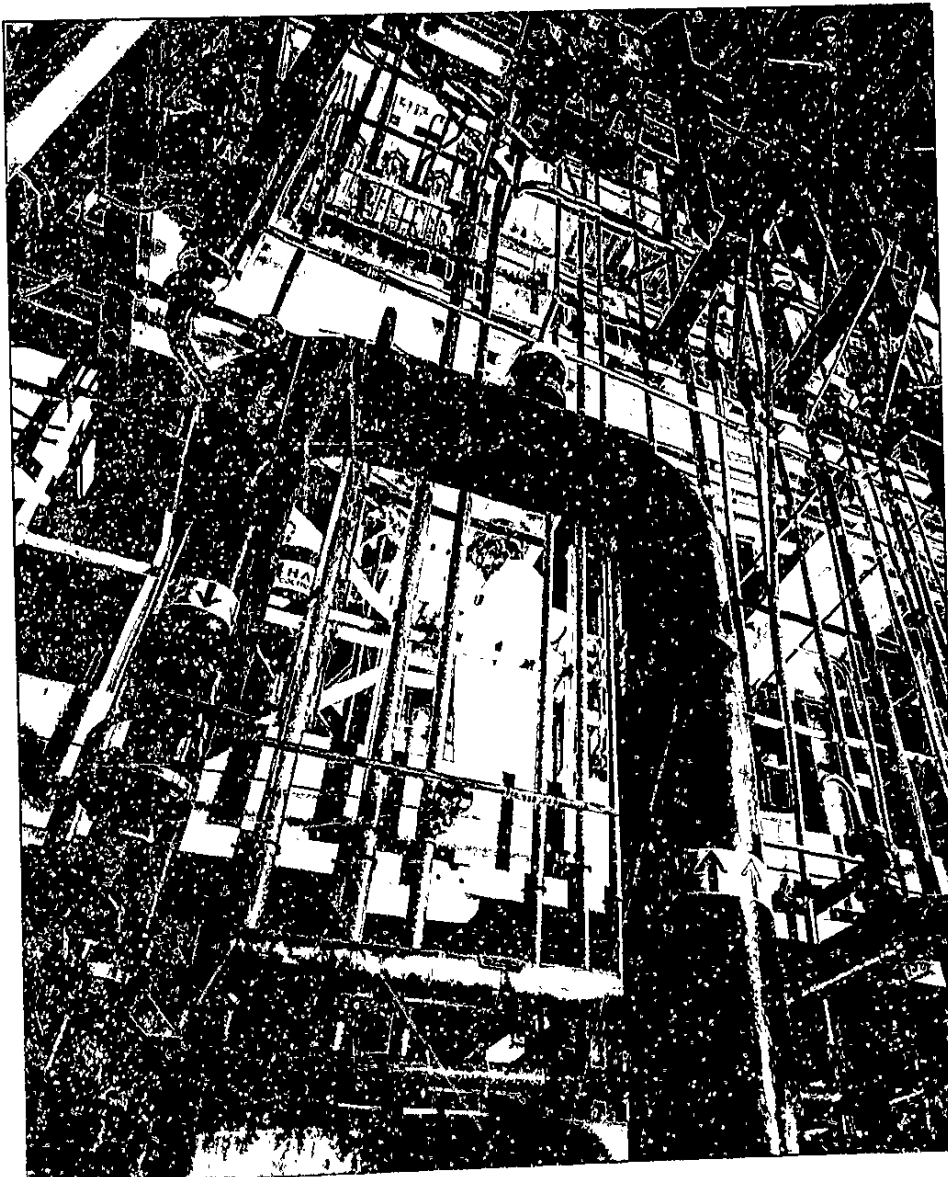
department can call on the expertise of a wide range of scientists for its safety work, plant operational support and work into identifying ways of making the Springfields' processes more efficient. This includes research into automated handling and inspection as well as into alternative processes. During 1984/85, the department has been involved in commissioning of the IDR process employed in the USA under licence from BNFL.

The work includes mathematical modelling and use of computing methods, simple laboratory experiments and pilot plants—for the production of fluorine, for example. Extensive development facilities for the production of ceramic fuels include various types of presses, sintering furnaces and equipment for non-destructive testing involving laser, X-ray and gamma

scanning techniques.

Some £8 million was spent on development during 1984/85.

At Capenhurst, research is continuing on more advanced centrifuge designs and on laser technology for uranium enrichment, as well as the improvement of the efficiency of existing plants. The work involved is both theoretical and experimental and the department's use of computers has now been extended to the automatic operation of test rigs. Capenhurst has developed expertise in seismic investigations and undertakes work of this nature for other parts of BNFL and for outside industry. This, together with other work for reprocessing, now accounts for a significant part of the Capenhurst research and development effort.



Far left) Operating miniature pulsed columns in THORP pilot plant.

Above) Work on new uranium purification processes at Springfields.

Laboratory studies on liquid uranium hexafluoride purification

Left) Full-scale pulsed column test rig at Sellafield

Above) Shake table used in seismic investigations at Capenhurst.

Handling solvent in a glove box

Personnel

The average number of people employed by the Group during the year was 15,678 compared with 15,542 in 1984. The staff cover a wide range of skills and the workforce includes some 1500 graduates, predominantly engineers.

It is Company policy to give fair consideration to applications for employment from disabled people and to employ as many as practicable. General training, career development and promotion opportunities for disabled people are, as with all employees, appropriate to their skills and abilities.

A high priority is given to the development of employees to their maximum potential and they are encouraged to obtain appropriate qualifications to further their career development. During the year

some 1700 employees were granted additional leave and received assistance to follow further education courses.

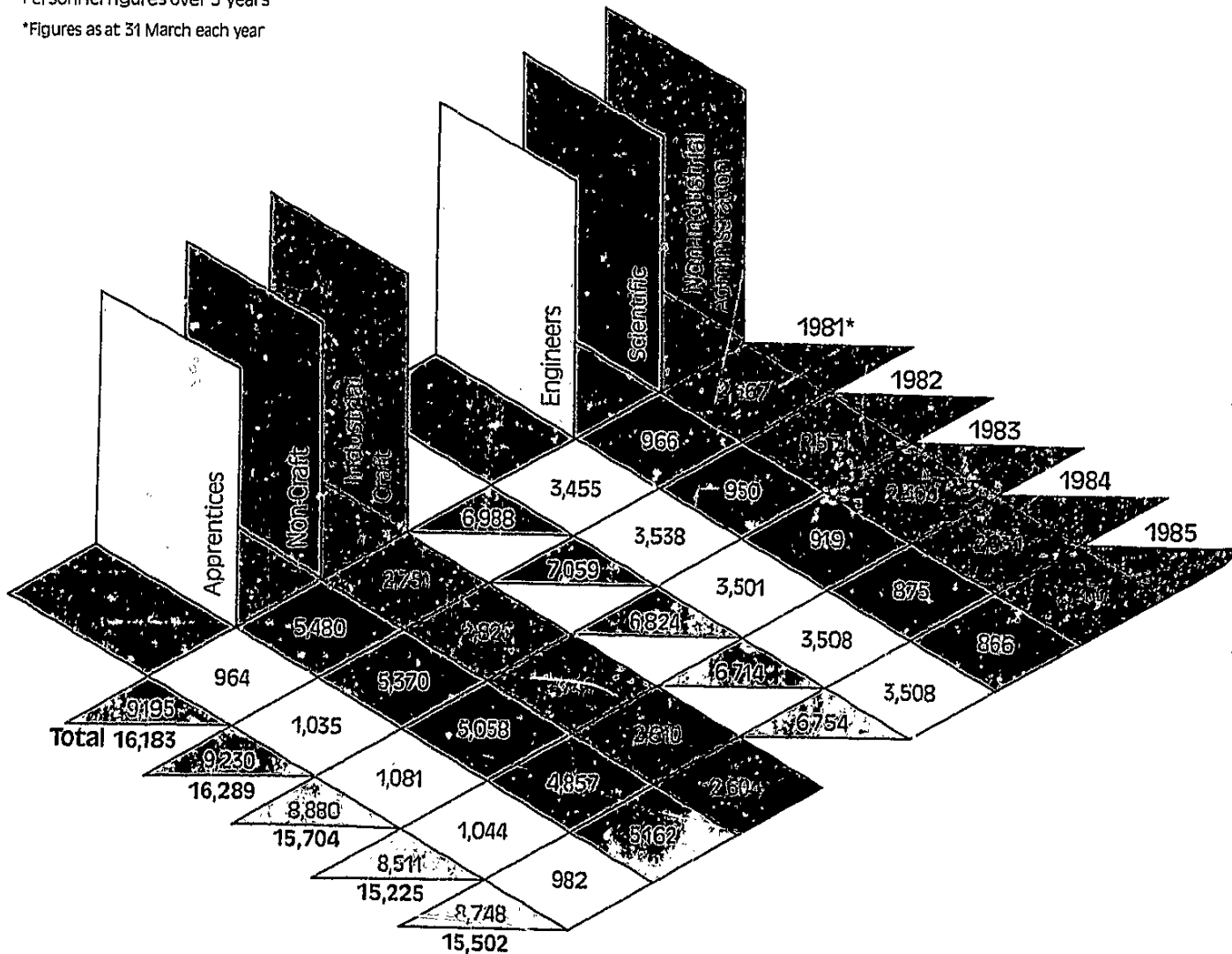
Training is recognised as an important activity and the Company has maintained a high level of both in-house and external training, some 2400 courses being organised during the year. BNFL has well-established apprentice schemes at all its sites, with some 1000 drawing office and craft apprentices under training at any one time.

An undergraduate sponsorship scheme provides financial assistance and training opportunities at many universities. More than 100 students are under sponsorship at any one time, although not all will embark on careers with BNFL.

Employees of all levels are involved, through a well-established system of joint consultation and negotiation in pay, conditions of service and other areas such as health and safety, catering and transport. The joint consultative machinery is structured from Company down to Works level and there is frequent informal contact between both sides.

Personnel figures over 5 years

*Figures as at 31 March each year





Bob Myers, process worker in Pond 5, Sellafield



Audrey Chesworth, catering assistant, Springfield.



Don Sutcliffe, design engineer, Risley



Gary Gordon, first year instrument apprentice at Sellafield.



David Walden, assistant plant manager, AGR canning, Springfield.



Senior Sister Brenda Anderson, Capenhurst.



Jack Wharton, chief engineer, Mechanical Engineering Design Office, Risley



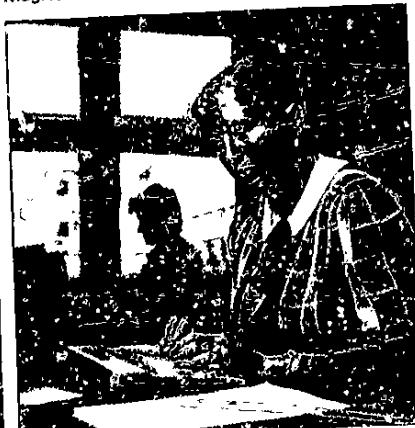
Eric Jackson, a production foreman in the Magnox canning plant, Springfield.



Steve Baxter, SIXEP commissioning manager, Sellafield.



Julie Daggers, assistant scientific officer, Springfield.



Janet Williams, typist, Risley



Michael Appleby quality assurance inspector, Springfield.

BNFL and the Community

The Company is committed to supporting the economic and social interests of the communities around its sites. Its programme of financial support ranges from the underwriting of major civic projects to numerous small donations.

At the end of the financial year, BNFL announced that it is to spend more than £600,000 on an international standard running track and associated buildings near Whitehaven. The eight-lane, 400 metre track will have a grandstand and facilities will include an indoor sports centre with changing rooms, badminton courts and a multi-gym. When completed, BNFL will finance the management.

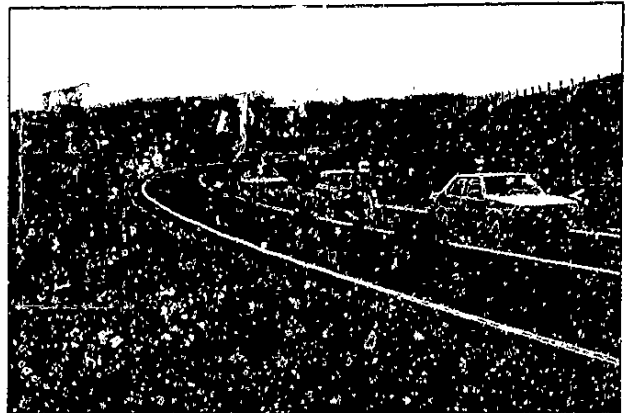
Sponsorships and donations worth £90,000 were made during the year, both to major national or local appeals and to local charities and organisations.

These include sporting organisations, music societies, schools, hospitals and associations for the sick and disabled. Major donations, often part of several years of commitment included those to two hospices, a CBI Project on Understanding British Industry and Imperial College of Science and Technology. Deeside, Warrington, Chester and the Dumfries area of Scotland are also benefiting from job creation sponsorships.

Nearly £3 million has now been invested in a project, announced after the Windscale Inquiry, to provide housing in Whitehaven as part of a local authority redevelopment scheme.

A further £4.5 million has been invested in a new Sellafield access road which was officially opened during the year. Totally funded by BNFL, this represents the final stage of improvements carried out by the Company to ease traffic access to the site.

Support is not limited to cash funding however. Manpower and skills frequently represent a significant contribution to projects undertaken. Often this involves the skills of BNFL's apprentices, as for example, when Sellafield apprentices refurbished the interior of the



The new access road to Sellafield, paid for by BNFL.

Old Customs House in Whitehaven, now being used by Age Concern.

Apprentices are also encouraged to take part in local community and charity projects through the Duke of Edinburgh Award Scheme, or City Challenge, a scheme which includes projects to help the elderly, sick and handicapped.

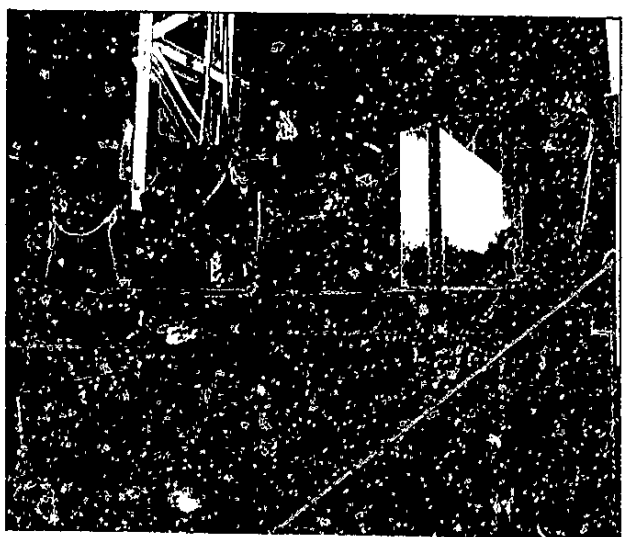
Educating the public in the importance of industry is of prime importance and as well as operating its own Talks Service, BNFL is associated with a number of educational support groups in the areas around its sites.

An essential link between BNFL operational sites and local communities is provided by the local liaison committees on which BNFL managers meet regularly with representatives of local authorities, the health and emergency services, the Nuclear Installations Inspectorate and Authorising Departments. The largest of these is the Sellafield local liaison committee which meets in public and whose wide-ranging discussions about site operations and new developments are regularly reported in the press and on local radio.



Restoration of Georgian buildings, Whitehaven.

Sellafield apprentices rebuild a steam locomotive for the Isle of Man.



Public Relations

BNFL regards the maintenance of public support for its role in the nuclear industry as a key objective. It recognises that such support must go hand in hand with confidence that the Company carries out its responsibilities safely and efficiently.

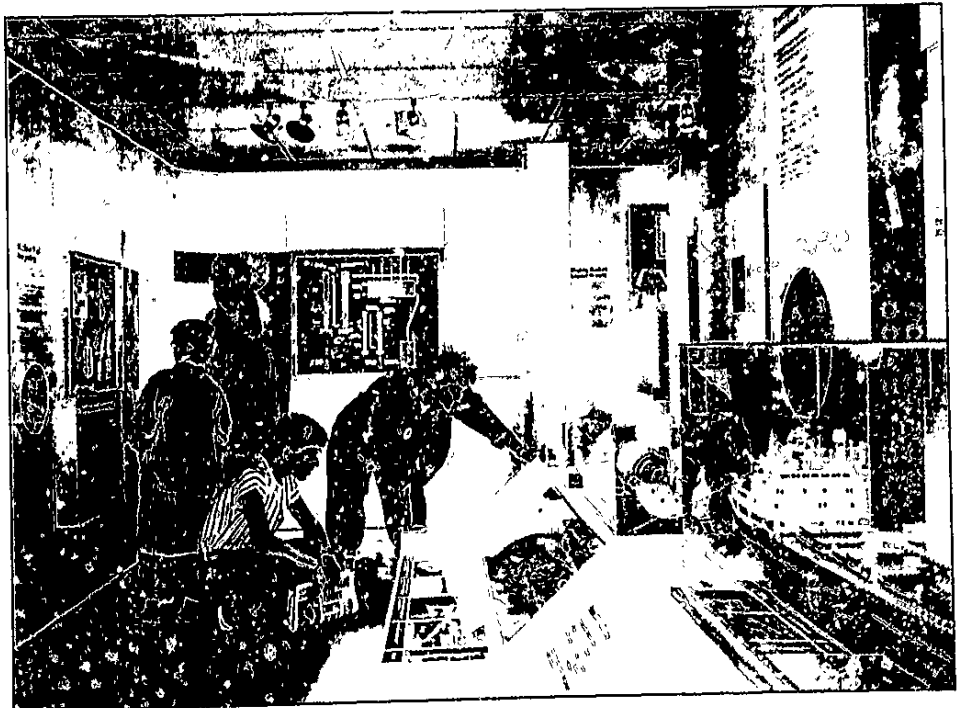
Public acceptance can only be based on knowledge and understanding of the Company's activities and the associated technology. To promote such understanding BNFL pursues a continuous and wide-ranging programme of public information at both national and local level.

This programme includes close liaison with the Press and broadcasting media, constituting as they do the main sources of information about the Company to the public at large. It also includes a variety of initiatives designed to foster direct contact with the public as individuals and as members of the many groupings in society. Important among these activities are the talks, (380 last year), given to a variety of organisations by volunteer members of staff, visits to the Company's operational sites (29,861 in 1984/85),

exhibitions at events all over the country, and liaison with the education service.

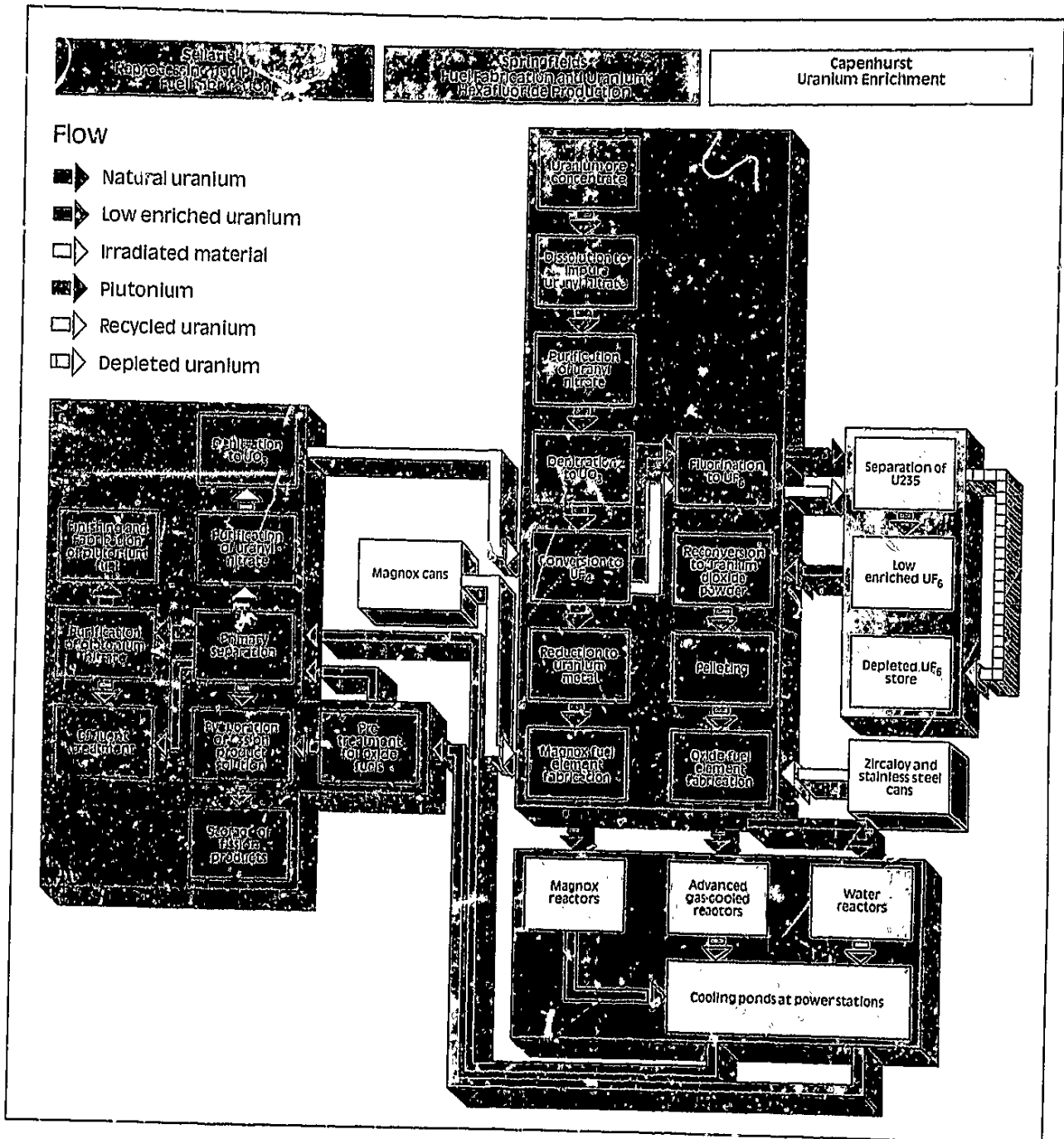
Additionally the Company devotes significant effort to ensure that opinion formers and decision takers are appropriately informed about its work and associated issues. This programme included liaison with elected representatives ranging from MPs and Members of the European Parliament to parish councillors, with the liaison committees based on each of the Company's works playing a significant role at the local level.

Important ingredients in the overall information programme are the various measures devoted to providing a full and accurate flow of information about the Company to BNFL's own staff. To supplement well-established communications aids such as the Company newspaper, "BNFL News", a new service called "Newslink" based on viewdata technology was introduced during the year on a pilot scale at head office and extension to other Company sites is under consideration.



The permanent exhibition centre at Sellafield.
New viewdata communications system at Risley.

Nuclear Fuel Cycle



BRITISH NUCLEAR FUELS plc
 Sir John Hill Honorary President
Board of Directors



Con Allday CBE
 Chairman and Chief Executive



Jack Tatlock CBE
 Deputy Chief Executive

Executive Directors



Harold Bolter Secretary



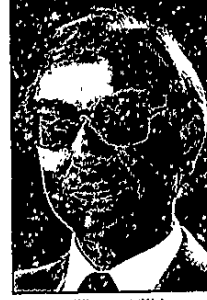
John Hayles



Alan Johnson



Roy Pilling



Dr William Wilkinson

Non-Executive Directors



Dr Norman Franklin CBE



Christopher Harding



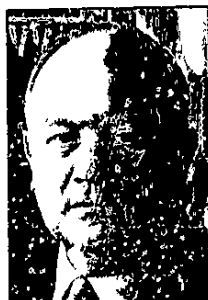
Dr Thomas Marsham CBE



Richard Morris



William Scott OBE



Sir Philip Shelbourne



John Wills OBE

BRITISH NUCLEAR FUELS plc
Report of the Directors
FOR THE YEAR ENDED 31 MARCH 1985

1 The Directors of British Nuclear Fuels plc have pleasure in submitting to the Shareholders their Fourteenth Annual Report together with the audited Accounts for the year ended 31 March 1985.

2 The full accounts of the Group are set out on pages 40 to 61 and include, on a consolidated basis, the accounts of the Group Companies listed on page 57 together with the accounts of the UK Partnership through which the Group participates in the production of enriched uranium using the centrifuge process.

Review of the year

3 Group Results

Turnover at £545M has increased by some 18% from 1984 (£460M), most notably in the export area with an increase of around 41% to £128M from last year's £91M principally on the toll enrichment of uranium. The level of profits before financial charges and tax at £135M is approximately 14% higher than 1984 (£118M).

The profit improvement, which reflects not only the benefits from increased export sales but also the return from new investment for business with the Home Boards, is most encouraging bearing in mind the adverse effects of an extended shutdown of the Magnox reprocessing plant at Sellafield and the necessity to increase the provision for liabilities and charges on waste products by £56M. This increase in provisions follows the major decision to adopt a policy of encapsulating certain types of intermediate level waste and the associated decision to construct the first encapsulation plant. The total provision in respect of waste products covers the estimated liability for treatment and storage of stocks of all high and intermediate level waste products for which the Group has a financial responsibility. The increase in waste provisions was however partially offset by a release of £14M on the decommissioning provision, following a reassessment of the life of the Calder and Chapelcross reactors. Provision movements of this kind have a major effect, particularly on electricity generation, where the significant decrease in profitability compared with 1984 is attributable to changes in the level of provision requirements in the two years. It should be noted that the Group results in 1984 were also affected by the need to provide £33M for losses on long-term contracts. Details of provisions and long-term liabilities are given in Note 14 to the Accounts. Increased financial charges, mainly due to the additional borrowing necessary to finance the capital programme, have offset the

higher levels of operating profit. Consequently the return on shareholders' funds shows some decrease with the profit after tax and minority interest giving a return of 27% compared to 31% in 1984.

On a current cost basis the profit before gearing adjustment, financial charges and tax is £71M (1984 £65M) and this represents a return on current cost assets employed of 4.5% (1984 5.1%).

4 Dividend

The Directors recommend that the dividend should be maintained at the same level as last year and that a final dividend of 37½% should be paid making a total of 50% for the year.

5 Finance

- a Group capital expenditure of £367M (Parent £323M) has been incurred during the year, mainly on the continued upgrading of reprocessing facilities at Sellafield and on centrifuge enrichment plants at Capenhurst.
- b During the year the Parent Company borrowed £141M under facilities established with the European Investment Bank and the International Westminster Bank plc.

6 BNFL Prosecution

Arising from an incident at Sellafield in November 1983, involving an unscheduled discharge of radioactivity to sea, the Company was prosecuted at Carlisle Crown Court during June and July 1985 on six charges under the Radioactive Substances Act, 1960 and the Nuclear Installations Act, 1965. On two charges, alleging failure to keep adequate records of radioactive material and failure to keep radioactive material under control, BNFL was acquitted by direction of the Judge, Mr Justice Rose. The jury recorded guilty verdicts on three other charges, of failure to ensure that radiation exposure resulting from radioactive discharges was as low as reasonably achievable, failure to keep records of radioactive material discharged to sea and failure to take all reasonable steps to minimise exposure of persons to radiation. On these counts, and the remaining charge relating to a further record keeping offence to which the Company pleaded guilty, BNFL was fined a total of £10,000 and ordered to pay prosecution costs up to £60,000.

7 Activities

There were no significant changes in the main activities of the Group, which are:

BRITISH NUCLEAR FUELS plc
Report of the Directors continued
FOR THE YEAR ENDED 31 MARCH 1985

a Nuclear Fuel Services

The conversion and enrichment of uranium; the manufacture and supply of uranium and plutonium based fuels and the provision of related fuel cycle services for nuclear power stations; and the reprocessing of nuclear fuel after use and associated waste treatment and storage.

b Electricity Generation

The supply of electricity to the English and Scottish grids from the Calder and Chapelcross nuclear power stations.

c Other Activities

These include research, development and the design and construction of plant and equipment associated with the Group's activities.

Information on the activities and developments of the business of the Group during the year is contained in the Company Review pages 6 to 36.

Future developments

8 The Group's principal areas of activity are expected to continue unchanged. Capital expenditure authorised at the end of the year was £1985M of which contracts have been placed for £158M. The expenditure arises from the major investment programme of the Group, which is referred to in the Company Review. This programme totals £3,700M over the next ten years but a substantial part of its financing will be met from internally generated funds and advances from customers. External sources of medium and long-term finance needed to meet requirements in the next financial year are under review and negotiation. These and other future requirements will be supported where necessary by the provisions of the Nuclear Industry (Finance) Acts 1977 and 1981.

Research and development

9 The Group has a significant research and development programme and this will continue. The principal areas are referred to in the Company Review on pages 30 and 31.

Corporate plan

10 The Group annually submits a forward Plan covering the next ten years to the Department of Energy. This is the mechanism by which the Department is notified of and approves the Group's projected programmes.

Personnel

11 The average number of persons employed by the Group during the year was 15,678 (1984 15,542). Further information is given in the Notes to the Accounts on page 46, and in the Company Review, pages 32 and 33, which also deals with Employee Involvement and Employment of Disabled Persons.

The Board of Directors

12 The names of the Directors of the Group are set out on page 37. Mr W N Scott OBE, Mr H E Bolter and Dr W L Wilkinson were appointed to the Board on 7 June 1984 and Mr J R Wills OBE and Mr C G F Harding were appointed on 19 September 1984. Dr D G Avery CBE, retired from the Board on 31 January 1985 after a long and distinguished career in the nuclear industry. All other Directors served throughout the year.

13 **Directors' shareholdings and interests**
No Director held, at any time during the year, any shares in, or Convertible Loan Stock of the Company, or of its subsidiaries, or of any related company (apart from holdings of shares as nominees in Combustibili Nucleari SpA by those who are Directors of that Company as required by Italian Law). No Director had during the year any material interest in a contract which is significant in relation to the business of the Company or of the Group, although Dr T N Marsham was a full-time member and Mr C Allday and Dr N L Franklin were part-time members of the United Kingdom Atomic Energy Authority, which has a number of substantial contracts with the Group.

Contributions for political or charitable purposes

14 No contributions were made for political purposes. Contributions to charities during the year amounted to £51,000 (1984 £44,000).

Auditors

15 A resolution to re-appoint the Auditors, Coopers & Lybrand, will be proposed at the General Meeting.



By order of the Board
H E Bolter, Secretary
5 August 1985

BRITISH NUCLEAR FUELS plc
Report of the Auditors
TO THE MEMBERS OF BRITISH NUCLEAR FUELS plc

We have audited the accounts set out on pages 40 to 61 in accordance with approved Auditing Standards. The accounts on pages 40 to 57 have been prepared under the historical cost convention and the supplementary accounts on pages 58 to 61 have been prepared under the current cost convention as described in Statement of Standard Accounting Practice No. 16.

These accounts reflect the long-term nature of the Group's activities, as explained in the paragraphs on the Determination of Policies and Provisions and Long-term Commitments set out in the Accounting Policies on pages 40 and 41.

In our opinion the accounts on pages 40 to 57 give a true and fair view of the state of affairs of

the Company and the Group at 31 March 1985 and of the profit and source and application of funds of the Group for the year then ended, and comply with the Companies Act 1985.

In our opinion the supplementary current cost accounts on pages 58 to 61 have been properly prepared, in accordance with the policies and methods described on pages 60 and 61, to give the information required by Statement of Standard Accounting Practice No. 16.

Coopers & Lybrand
Chartered Accountants

Coopers & Lybrand

London
5 August 1985

Accounting Policies

Determination of Policies

The Group's activities are described in the Directors' Report and the Company Review, which contains a detailed review of the year's operations. To a large extent the Company's plants have been or are being constructed for the purpose of servicing specific trading agreements and contracts with both United Kingdom and overseas customers for the provision of Nuclear Fuel Services. Certain of these contracts are of a long-term nature and are not scheduled for completion until the end of this century. The processes involved are of a highly technical nature. The Group is subject to external regulatory requirements and keeps under constant review the safety standards appropriate to its activities in providing for ultimate plant decommissioning and the treatment, storage and disposal of waste products. These factors have affected the Group's determination of two of its major accounting policies, namely, Policy 3 - Provisions and Long-term Commitments and Policy 6 - which describes the depreciation policies for Fixed Assets.

The full Accounting Policies are as follows:

1 Consolidation

a The consolidated accounts include the accounts of British Nuclear Fuels plc, its Group companies, as listed on page 57 and the accounts of the Urenco (UK) Partnership, all of which are made up to 31 March.

b The consolidated accounts also include the Group's share of the profits less losses (in so far as they are not covered by Government grants available) shown by the accounts of the related companies listed on page 57. The accounts of the related companies are made up to 31 December in each year.

c Foreign currency balances are translated at the exchange rate ruling at the Balance Sheet date or at the rate of exchange specified in a related or matching forward contract. Exchange differences arising from the retranslation of the opening net investment in related foreign enterprises are taken to reserves. Other exchange differences are dealt with in the Profit and Loss Account.

2 Turnover

Turnover represents the total invoiced value of products delivered and services rendered to outside customers. In respect of contracts entered into for the provision of nuclear fuel services extending over a period of years, profit is taken in the year in which the services are provided and invoiced.

BRITISH NUCLEAR FUELS plc
Accounting Policies continued

3 Provisions and Long-term Commitments

a To the extent that the costs are not considered to be recoverable from customers by way of a specific charge at the time the costs are incurred:

- i. Provision is made over their useful lives for the expected cost of decommissioning the Group's radioactive facilities. On being taken out of service, such radioactive facilities will be closed down and maintained in an acceptably safe condition. Provision is not made for the complete demolition and removal of decommissioned facilities on the assumption that the Group will continue to occupy the site on which each facility is located.
- ii. Provision is made for the expected cost of reprocessing irradiated metal fuel in the Group's storage ponds.
- iii. Provision is made for the expected cost of treatment and storage of the Group's highly-active and intermediate level waste products. Provision will not be made for the ultimate disposal of these wastes until appropriate routes approved by the Regulatory Bodies have been established. The costs associated with arisings of waste products for which an authorised disposal route is already in use, principally low level waste at present, are written off in the year in which they are incurred.
- iv. Provision is made for any losses which are expected to arise on contracts entered into at the Balance Sheet date, whether or not work on these contracts has commenced.

b These provisions are based on the latest technical assessments of the processes and methods likely to be used in the future and represent estimates derived from a combination of the latest technical knowledge available, existing legislation and regulations and commercial agreements evaluated at the Balance Sheet date at current prices. These estimates are reviewed annually and any consequential changes to the provisions that are required are taken up in the accounts for the year in which they arise.

4 Research and development expenditure

Research and development expenditure on projects not supported by firm orders is written off in the year in which it is incurred.

Expenditure on products for which firm orders have been received is held as part of the value of stocks and work in progress for recovery against the sales value of the initial orders.

5 Development and exploitation of centrifuge process

Government grants received in respect of the development and exploitation of the centrifuge process are treated as a deferred income and released to Profit and Loss Account against related expenditure written off.

6 Fixed assets

a Depreciation is calculated to write off the historic cost of assets, generally by equal annual instalments, over the period assessed as their useful lives or, in the case of contractually committed assets acquired to meet specific contracts over the period in which the cost of these assets is recoverable from the customers. The periods used for depreciation purposes of the major categories of fixed assets are:

Buildings 10 to 60 years

Plant and Machinery 10 years

Provision is not made for depreciation on freehold land or assets in course of construction.

Leasehold land is amortised over the period of the lease.

b Regional Development Grants are treated as a deferred income and transfers are made to Profit and Loss Account, generally by equal annual instalments, over the period used for depreciation purposes for the assets to which they relate.

7 Stocks and work in progress

Stocks and work in progress are valued at cost or net realisable value whichever is the lower, and in the case of work in progress after deduction of progress payments. Cost where appropriate includes a proportion of all factory overhead expenses.

8 Deferred taxation

Provision is made for taxation deferred as a result of material timing differences calculated on the liability method, except where no liability is expected to arise in the foreseeable future.

BRITISH NUCLEAR FUELS plc
Consolidated Profit and Loss Account
 FOR THE YEAR ENDED 31 MARCH 1985

	Note	1985 £M	1984 £M
Turnover	1	545.1	459.5
Less Net Operating Costs and Expenses	2	406.9	334.7
Operating Profit	1	138.2	124.8
Less Research and Development Written Off		3.8	8.5
		134.4	116.3
Income from Fixed Asset Investments		0.8	1.4
		135.2	117.7
Less Financial Charges	5	66.8	46.9
Profit on Ordinary Activities before Tax		68.4	70.8
Tax on Profit on Ordinary Activities	6	11.0	18.1
Profit on Ordinary Activities after Tax		57.4	52.7
Profit attributable to Minority Interests		3.8	1.4
Profit for the Financial Year		53.6	51.3
Dividends	7	16.3	16.3
Retained Profit for the Year		37.3	35.0

Statement of Retained Profit/Reserves

At beginning of year	149.8	115.0
Profit retained for year		
British Nuclear Fuels plc	33.3	33.8
Group Companies	3.9	0.7
Related Companies	0.1	0.5
	37.3	35.0
Exchange differences taken direct to reserves	(0.1)	(0.2)
At end of year	187.0	149.8

The Accounting Policies on pages 40 and 41 and notes on pages 45 to 57 form an integral part of the accounts.

The Auditors' Report is on page 40.

BRITISH NUCLEAR FUELS plc
Balance Sheets
AS AT 31 MARCH 1985

	Note	Group		Parent	
		1985	1984	1985	1984
		£M	£M	£M	£M
Assets Employed					
Fixed Assets:					
Tangible Assets	8	1,456.1	1,154.9	1,213.6	934.7
Investments	9	7.7	7.2	163.5	147.1
		1,463.8	1,162.1	1,377.1	1,081.8
Current Assets:					
Stocks	10	182.4	178.4	141.5	131.2
Debtors	11	207.0	142.7	215.9	154.8
Investments (short-term deposits)		12.1	5.3	—	1.9
Cash at bank and in hand		2.9	1.7	2.9	1.6
		404.4	328.1	360.3	289.5
Less Creditors: amounts falling due within one year	12	291.1	246.4	283.0	237.4
Net current assets (liabilities)		113.3	81.7	77.3	52.1
Total assets less current liabilities		1,577.1	1,243.8	1,454.4	1,133.9
Financed By					
Creditors: amounts falling due after more than one year	13	875.7	665.7	849.0	642.3
Provisions for liabilities and charges	14	269.5	208.4	248.8	192.6
Accruals and deferred income	15	193.1	171.2	142.0	119.2
Capital and Reserves:					
Called up Share Capital	16	32.7	32.7	32.7	32.7
Exchange Differences		0.4	0.5	—	—
Profit and Loss Account	17	186.6	149.3	181.9	147.1
Shareholders' Interest		219.7	182.5	214.6	179.8
Minority Interests		19.1	16.0	—	—
		1,577.1	1,243.8	1,454.4	1,133.9

C Allday
J M Hayles Directors

C Allday
J M Hayles

The Accounting Policies on pages 40 and 41 and notes on pages 45 to 57 form an integral part of the accounts.

The Auditors' Report is on page 46.

BRITISH NUCLEAR FUELS plc
Consolidated Source and Application of Funds Statement
 FOR THE YEAR ENDED 31 MARCH 1985

	1985		1984	
	£M	£M	£M	£M
Source of Funds				
Profit on Ordinary Activities before Taxation		68.4		70.8
Adjustments for items not involving movement of funds:				
(Profit) retained in Related Companies		(0.1)		(0.5)
Depreciation of Tangible Fixed Assets		64.7		47.3
Government Grants released		(10.2)		(10.5)
Increase in amounts set aside re provisions for liabilities and charges		57.5		45.5
Total generated from Operations		180.3		152.6
Funds from other sources				
Disposal of Tangible Fixed Assets		0.7		0.3
Payments on account under long-term contracts		74.1		33.5
Government Grants receivable		32.1		40.7
Loans received	155.4		141.2	
Less increase in amounts repayable within one year	(5.0)		25.0	
		150.4		166.2
Increase in Minority Interests in a Group Company and a Partnership		3.1		0.8
		440.7		394.1
Application of Funds				
Purchase of Tangible Fixed Assets	366.6		296.3	
Dividends paid	16.3		16.4	
Repayment of Loans	14.5		39.5	
Advance Corporation Tax paid	7.3		7.1	
Investment in Partnerships and Related Companies (Fixed Asset Investments)	0.5		1.3	
		405.2		360.6
		35.5		33.5
Increase/(Decrease) in Working Capital				
Stocks		4.0		35.2
Debtors		64.3		0.9
Creditors—amounts due within one year		(11.5)		23.7
Movement in net liquid funds:				
Investments (short-term deposits)	6.8		(6.4)	
Cash at bank and in hand	(28.1)		(19.9)	
		(21.3)		(26.3)
		35.5		33.5

BRITISH NUCLEAR FUELS plc
Notes on the Accounts

	Turnover		Operating Profit	
	1985	1984	1985	1984
	£M	£M	£M	£M
1 Turnover				
The contributions to turnover and operating profits made by the different classes of business were as follows:				
Nuclear Fuel Services	485.6	401.6	128.7	100.9
Electricity	59.5	57.9	9.5	23.9
	<u>545.1</u>	<u>459.5</u>	<u>138.2</u>	<u>124.8</u>

As noted in the Directors' Report, the significant decrease in profitability in electricity is attributable to the changes in the level of provision requirements in the two years.

	1985		1984	
	£M	%	£M	%
Turnover can be further analysed:				
Home	417.5	76.6	369.0	80.3
Export: European Community Countries	53.5	9.8	25.9	5.6
Other European Countries	2.9	0.5	2.8	0.6
Japan and the Far East	57.7	10.6	56.9	12.4
North and South America	13.5	2.5	4.9	1.1
	<u>127.6</u>		<u>90.5</u>	
	<u>545.1</u>		<u>459.5</u>	

	1985	1984
	£M	£M
2 Net operating costs and expenses		
Net Operating Costs and Expenses are made up as follows:		
Raw materials and consumables	121.1	93.3
Employee Costs	201.3	188.2
Depreciation	64.7	47.3
Provision for Liabilities and Charges (a)	58.6	43.1
Hire of Plant and Machinery	4.0	2.9
Other External and Operating Charges (b)	117.3	97.6
Operating Costs and Expenses	<u>567.0</u>	<u>472.4</u>
Less: Changes in stocks of finished goods and work in progress	17.4	22.3
Own work capitalised	101.7	76.8
Own work on manufacture of components	23.0	15.7
Regional Development Grants released	7.7	7.9
Centrifuge Assistance Released	2.6	2.6
Other Operating Income	7.7	12.4
	<u>406.9</u>	<u>334.7</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

2 Net operating costs and expenses continued

- a Provision for Liabilities and Charges includes exceptional amounts of £42M in 1985 and £33M in 1984. The charge in 1985 arises from the need to provide £56M for the treatment of Intermediate Level Wastes for which BNFL has financial liability following the decision to proceed with a policy for the encapsulation of these wastes which are presently stored in various forms on the site. This charge was partially offset by a release of £14M on the decommissioning provision following a re-assessment of the lives of the Calder and Chapelcross reactors. As reported in 1984 the charge of £33M in that year was for losses on long-term contracts.
- b Other External and Operating Charges includes Auditors' Remuneration of £69,750 (1984 £60,300) of which £58,000 (1984 £51,000) relates to the parent Company.

	1985	1984
	Number	Number
3 Employee Information		
The figures given below, other than in note (c) include information on Parent Company executive directors.		
a The average number of persons employed by the Group during the year was:		
Non-Industrial	6,805	6,718
Industrial	8,680	8,643
Officers and Ratings of Transport Ships	193	181
	<u>15,678</u>	<u>15,542</u>
	1985	1984
b Employee costs	£M	£M
Wages and Salaries	167.7	153.0
Social Security Costs	11.7	11.8
Other Pension Costs	18.9	19.8
Other Employee Costs (early retirement etc)	3.0	3.6
	<u>201.3</u>	<u>188.2</u>
	1985	1984
Employees of the Group other than officers and crew of transport ships who are members of the appropriate seamen's pension schemes, are members of the appropriate United Kingdom Atomic Energy Authority superannuation schemes. The Company's contributions were as follows:	£M	£M
Principal non-industrial scheme	9.1	9.2
Protected Persons scheme	3.7	4.7
Industrial scheme	5.9	5.7
Total UKAEA schemes	18.7	19.6
Seamen's pension schemes	0.2	0.2
	<u>18.9</u>	<u>19.8</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985	1984
c Employees earning more than £30,000 per annum*	Number	Number
£30,001 to £35,000	13	10
£35,001 to £40,000	6	2
£40,001 to £45,000	1	—
£45,001 to £50,000	2	—

*Including taxable transfer grants payable on relocation in the Company's interest.

	1985	1984
4 Directors emoluments and other statutory information	£M	£M
The aggregate emoluments of the Directors of British Nuclear Fuels plc during the year were:		
Fees £27,493 (1984 £18,000)	—	—
Management	0.4	0.3

The emoluments, excluding pension provision by the Company, of the Directors in the various ranges are as follows:

	1985	1984
Range	Number	Number
Nil to £5,000	7	4
£30,001 to £35,000	1	1
£35,001 to £40,000	2	3
£40,001 to £45,000	3	2
£45,001 to £50,000	1	—
£55,001 to £60,000	—	1
£60,001 to £65,000	1	—
Emoluments of the Chairman	£60,411	£57,745

The ranges include where appropriate taxable transfer grants payable on relocation in the Company's interest.

A pension paid to a former Director amounted to £2,839 (1984 Nil). Included in debtors is an interest free loan of £8,167 to a Director (Dr W L Wilkinson). This loan was made prior to his joining the Board in accordance with the Company's policy of providing housing assistance to staff who have been relocated.

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985	1984
	£M	£M
5 Financial charges		
Interest on loans: repayable within five years	25.2	13.9
repayable after five years	24.7	20.6
	49.9	34.5
Interest on bank overdraft and short-term loans	6.1	4.2
	56.0	38.7
Other financial charges:		
Bank Commissions etc.	1.6	1.4
Adjustment to opening provisions arising from changes in price levels	10.4	8.1
Interest payable and similar charges	68.0	48.2
Less Interest receivable from short-term deposits	1.2	1.3
Net Financial Charges	<u>66.8</u>	<u>46.9</u>

	1985	1984
	£M	£M
6 Tax on profits on ordinary activities		
Related Companies Taxation	0.2	0.7
Advance Corporation Tax	6.3	6.3
Deferred Taxation (at 35%)	4.5	11.1
	<u>11.0</u>	<u>18.1</u>

No charge for Corporation Tax on the profits of the year arises as a result of accelerated capital allowances and other timing differences. The benefit of these amounted in the year to £14.9M. Full provision has been made in one of the Subsidiary Companies for Deferred Taxation.

	1985	1984
	£M	£M
7 Dividends		
Interim Dividend paid 12¼% (1984 12¼%)	4.0	4.0
Final Dividend proposed 37¼% (1984 37¼%)	12.3	12.3
	<u>16.3</u>	<u>16.3</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

8 Fixed assets – Tangible assets

a A summary of the tangible assets, held by the Group, is as follows:

	Land and Buildings		Plant and Machinery	Fixtures Fittings Tools and Equipment	Assets in Course of Construction	Total
	Long Leasehold	Freehold				
	£M	£M	£M	£M	£M	£M
Cost at 1 April 1984	3.8	153.3	550.5	9.1	684.0	1,400.7
Acquisitions	—	—	—	—	366.6	366.6
Disposals	—	(2.0)	(1.0)	(0.3)	—	(3.3)
Transfers	—	32.2	158.5	5.8	(196.5)	—
Cost at 31 March 1985	3.8	183.5	708.0	14.6	854.1	1,764.0
Depreciation at 1 April 1984	0.3	41.3	200.0	4.2	—	245.8
Charge for Year	0.1	11.4	51.4	1.8	—	64.7
Disposals	—	(1.3)	(1.0)	(0.3)	—	(2.6)
Depreciation at 31 March 1985	0.4	51.4	250.4	5.7	—	307.9
Net book value at 31 March 1985	3.4	132.1	457.6	8.9	854.1	1,456.1

b A summary of the tangible assets, held by the Parent Company, is as follows:

	Land and Buildings		Plant and Machinery	Fixtures Fittings Tools and Equipment	Assets in Course of Construction	Total
	Long Leasehold	Freehold				
	£M	£M	£M	£M	£M	£M
Cost at 1 April 1984	3.8	136.2	330.2	9.1	646.4	1,125.7
Acquisitions	—	—	—	—	322.6	322.6
Disposals	—	(2.0)	(1.0)	(0.3)	—	(3.3)
Transfers	—	32.2	154.6	5.8	(192.6)	—
Cost at 31 March 1985	3.8	166.4	483.8	14.6	776.4	1,445.0
Depreciation at 1 April 1984	0.3	39.8	146.7	4.2	—	191.0
Charge for Year	0.1	10.6	30.5	1.8	—	43.0
Disposals	—	(1.3)	(1.0)	(0.3)	—	(2.6)
Depreciation at 31 March 1985	0.4	49.1	176.2	5.7	—	231.4
Net book value at 31 March 1985	3.4	117.3	307.6	8.9	776.4	1,213.6

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
9 Fixed assets – Investments				
<i>Group Companies:</i>				
Unquoted Shares at Cost	—	1.3	—	1.3
Convertible Unsecured Loan Stock at Cost	—	13.0	—	13.0
	—	14.3	—	14.3
	—	2.4	—	6.7
Provision for Losses	—	11.9	—	7.6
	—	151.0	—	139.0
Unsecured Loan Stock at Cost	—	162.9	—	146.9
<i>Related Companies:</i>				
Unquoted Shares at Cost	0.3	0.3	0.3	0.3
Loans and Advances	17.9	0.2	17.7	0.2
	18.2	0.5	18.0	0.5
	17.5	—	17.3	—
Less Amounts written off	0.7	0.5	0.7	0.5
	1.6	—	1.5	—
Share of retained profits	2.3	0.5	2.2	0.5
Advances to partnerships	5.3	—	5.0	—
Other Fixed Asset Investments	0.1	0.1	—	—
Total Fixed Asset Investments	7.7	163.5	7.2	147.1

- a The unquoted shares comprise investments in the Group and Related Companies listed on page 57.

Dividends from related companies amounting to £257,224 (1984 £242,164) have been received during the year.

- b Advances to Partnerships.
The Group is in partnership with Dutch and German organisations in Enterprises in the Netherlands and in Germany, for the purpose of producing enriched uranium using the centrifuge method. The Group's interest in each of the partnerships is 2% and is stated after deducting the Group's share of accumulated losses to date. Advances during the year include £0.4M (1984 £0.3M) share of profits for the year.

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
10 Stocks				
Raw materials and consumables	91.8	77.7	91.5	73.3
Work in Progress	48.4	40.4	52.4	43.8
Finished Goods	42.2	23.4	34.5	14.1
	<u>182.4</u>	<u>141.5</u>	<u>178.4</u>	<u>131.2</u>

Work in progress is stated after deducting progress payments of £42.5M (1984 £29.6M) and includes £14.8M (1984 £12.5M) which will not be realised within 12 months.

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
11 Debtors				
Trade Debtors	169.8	164.9	100.5	98.4
Amounts owed by Group Companies	—	16.2	—	17.7
Amounts owed by Related Companies	0.6	0.6	0.5	0.5
Other debtors	25.1	22.7	30.8	27.3
Prepayments and Accrued Income	11.5	11.5	10.9	10.9
	<u>207.0</u>	<u>215.9</u>	<u>142.7</u>	<u>154.8</u>

Trade debtors include £4.5M (1984 £3.1M) not due for more than one year.

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
12 Creditors: Amounts falling due within one year				
Current portion of long-term Loans	19.5	15.1	14.5	11.4
Bank Loans and Overdraft	63.7	63.7	34.4	34.4
Payments received on account	50.2	44.3	50.8	42.7
Trade Creditors	85.5	81.7	80.3	73.8
Amounts owed to Group Companies	—	7.9	—	9.9
Taxation	8.9	8.1	8.7	7.8
Social Security	2.2	2.2	2.2	2.2
Dividends	12.3	12.3	12.3	12.3
Accruals and Deferred Income	34.9	34.3	34.0	33.7
Current portion of provisions and long-term commitments	13.9	13.4	9.2	9.2
	<u>291.1</u>	<u>283.0</u>	<u>246.4</u>	<u>237.4</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
13 Creditors: Amounts falling due after more than one year				
Loans	529.4	510.8	393.5	382.5
Payments received on account	346.3	338.2	272.2	259.8
	<u>875.7</u>	<u>849.0</u>	<u>665.7</u>	<u>642.3</u>

a Loans	Period of Repayment	1985		1984	
		Group	Parent	Group	Parent
		£M	£M	£M	£M
Unsecured Loans					
9½%–11¾%	1985–1995	14.3	14.3	17.4	17.4
5½%	1985–1995	13.0	13.0	14.6	14.6
Bank Loans–Guaranteed Under Nuclear Industry Finance Acts					
½%–¾% above London Inter-Bank	1985–1991	243.2	243.2	190.0	190.0
10½%–12½%	1985–1995	250.8	250.8	166.5	166.5
Secured Bank Loans–Guaranteed by Secretary of State for Industry					
7½%	1985–1987	3.4	—	5.4	—
7½%	1985–1990	4.6	4.6	5.4	5.4
7½%	1985–1991	7.6	—	8.7	—
7½%	1985–1994	12.0	—	—	—
		<u>548.9</u>	<u>525.9</u>	<u>408.0</u>	<u>393.9</u>
Less repayable before 31 March 1986 included in current liabilities		19.5	15.1	14.5	11.4
		<u>529.4</u>	<u>510.8</u>	<u>393.5</u>	<u>382.5</u>
Loans are repayable by instalments within periods from Balance Sheet date of:					
From one to two years		13.3	9.6	15.8	12.7
From two to five years		235.2	227.0	112.0	107.0
Over five years		280.9	274.2	265.7	262.8
		<u>529.4</u>	<u>510.8</u>	<u>393.5</u>	<u>382.5</u>

b Payments on account have been received and are receivable from customers for the provision of services under long-term contracts. Credit will be given, when the services are provided, within periods from Balance Sheet date of:	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
From one to five years	91.1	86.9	66.7	59.8
Over five years	255.2	251.3	205.5	200.0
	<u>346.3</u>	<u>338.2</u>	<u>272.2</u>	<u>259.8</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

14 Provisions for liabilities and charges

A summary of the Provisions for liabilities and charges is as follows:

	Note	Decom- missioning	Waste Products	Future Re- processing Costs	Future Losses on Contracts	Deferred Tax	Other Provisions	Total
		£M	£M	£M	£M	£M	£M	£M
Balance at 1 April 1984:								
Parent Company		67.3	37.0	7.7	76.0	—	4.6	192.6
Subsidiary Companies		5.6	—	—	—	10.2	—	15.8
Group		<u>72.9</u>	<u>37.0</u>	<u>7.7</u>	<u>76.0</u>	<u>10.2</u>	<u>4.6</u>	<u>208.4</u>
Adjustment to Provisions arising from changes in price levels:								
	5							
Parent Company		3.4	1.9	0.6	3.9	—	0.3	10.1
Subsidiary Companies		0.3	—	—	—	—	—	0.3
Group		<u>3.7</u>	<u>1.9</u>	<u>0.6</u>	<u>3.9</u>	<u>—</u>	<u>0.3</u>	<u>10.4</u>
Charge in the Year:								
	2/6							
Parent Company		(11.5)	58.5	13.1	(5.0)	—	2.1	57.2
Subsidiary Companies		1.4	—	—	—	4.5	—	5.9
Group		<u>(10.1)</u>	<u>58.5</u>	<u>13.1</u>	<u>(5.0)</u>	<u>4.5</u>	<u>2.1</u>	<u>63.1</u>
Transfers from/(to) Creditors amounts due within one year:								
Parent Company		(4.1)	—	(6.4)	0.4	—	(1.0)	(11.1)
Subsidiary Companies		(0.4)	—	—	—	(0.9)	—	(1.3)
Group		<u>(4.5)</u>	<u>—</u>	<u>(6.4)</u>	<u>0.4</u>	<u>(0.9)</u>	<u>(1.0)</u>	<u>(12.4)</u>
Balance at 31 March 1985:								
Parent Company		55.1	97.4	15.0	75.3	—	6.0	248.8
Subsidiary Companies		6.9	—	—	—	13.8	—	20.7
Group		<u>62.0</u>	<u>97.4</u>	<u>15.0</u>	<u>75.3</u>	<u>13.8</u>	<u>6.0</u>	<u>269.5</u>

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985		1984	
	Full Potential	Provided	Full Potential	Provided
	£M	£M	£M	£M
a Deferred Tax				
Excess of book written down value of fixed assets eligible for taxation capital allowances over the taxation written down value of those assets:				
Parent Company	222.7	—	156.8	—
Subsidiary Companies	60.6	17.8	44.5	13.3
Group	283.3	17.8	201.3	13.3
The benefit of taxation losses carried forward:				
Parent Company	(92.7)	—	(63.1)	—
Subsidiary Companies	(42.9)	(0.1)	(31.2)	—
Group	(135.6)	(0.1)	(94.3)	—
Timing differences between the charging of particular items in the accounts and their equivalent deduction for taxation purposes:				
Parent Company	(80.6)	—	(62.0)	—
Subsidiary Companies	—	—	(0.1)	(0.1)
Group	(80.6)	—	(62.1)	(0.1)
Recoverable UK Corporation Tax:				
Parent Company	(22.2)	—	(15.8)	—
Subsidiary Companies	(3.9)	(3.9)	(3.0)	(3.0)
Group	(26.1)	(3.9)	(18.8)	(3.0)
Total:				
Parent Company	27.2	—	15.9	—
Subsidiary Companies	13.8	13.8	10.2	10.2
Group	41.0	13.8	26.1	10.2

The full liability for deferred taxation has been provided in respect of Pacific Nuclear Transport Limited.

No provision for deferred taxation is made in the Parent Company and Group Companies other than Pacific Nuclear Transport Limited because no liability is expected to arise in the foreseeable future. These Companies' plans over the next few years provide for an investment in fixed assets in respect of which the taxation capital allowances will be substantially in excess of the expected charge for depreciation.

At 31 March 1985 certain Companies in the Group had accumulated tax losses amounting to £8M which are available for off-set only against future taxable profits of those Companies and which have, therefore, not been included in the deferred taxation above.

BRITISH NUCLEAR FUELS plc
Notes on the Accounts continued

	1985		1984	
	Group	Parent	Group	Parent
	£M	£M	£M	£M
15 Accruals and deferred Income				
This comprises Government Grants held as a deferred credit.				
Regional Development Grants	179.3	142.0	154.8	119.2
Centrifuge Project	13.8	—	16.4	—
	<u>193.1</u>	<u>142.0</u>	<u>171.2</u>	<u>119.2</u>

HM Government provided financial support to the Group related to the cost of a defined initial programme of development work and plant construction in connection with the tripartite centrifuge project. In return, the Group has undertaken to make payments to the Department of Energy out of profits accruing from its centrifuge operations in future years.

	1985	1984
	£M	£M
16 Called up share capital		
Ordinary Shares of £1 each Authorised	43.0	43.0
Allotted, called up and Fully Paid	<u>32.7</u>	<u>32.7</u>

	£M
17 Parent company profit and loss account reserves	
Balance at 1 April 1984	147.1
Profit Retained	34.8
Balance at 31 March 1985	<u>181.9</u>

Parent Company Profit and Loss Account Reserves include £11.3M (1984 £9.8M) profit on transactions with Urenco (UK) Partnership and subsidiary companies which is eliminated on consolidation.

18 Capital expenditure authorised

Capital expenditure authorised but not provided for in these accounts amounted to £1,985M (1984 £2,071M) for the Group including £1,846M (1984 £1,932M) for the Company, for which contracts of £158M (1984 £177M) have been placed by the Group including £112M (1984 £121M) by the Company.

Notes on the Accounts continued

19 Contingent liabilities

At 31 March 1985 the parent Company had contingent liabilities incurred in the ordinary course of business arising out of guarantees and other transactions in respect of which, in the opinion of the Directors, no material losses are expected to arise. Details are:

- a Promissory Notes discounted totalling £2.6M of which 90% are covered by export insurance arrangements.
- b Contingent liabilities in respect of indemnities given to shippers of nuclear materials covered by a back to back guarantee from United Kingdom Atomic Energy Authority.
- c Contingent liabilities for raw material supplied and advance payments made by customers to Urenco Nederland and Urenco Deutschland of £88M arising from joint and several liabilities.
- d Guarantees by parent Company associated with other Group organisations for:
 - i. bank overdraft and loans up to a maximum of £9M
 - ii. £15M advanced on behalf of an overseas customer by the Export Credit Guarantee Department.
 - iii. Commitments to their partners in Urenco (UK), Urenco Nederland and Urenco Deutschland and to the other two Shareholders in Centec GmbH.

Group and Related Companies

Group Companies

BNFL Enrichment Limited

Is wholly owned by British Nuclear Fuels plc and is the central subsidiary through which all financial aspects of participation in the tripartite centrifuge project are handled.

In addition four subordinate companies, wholly owned through BNFL Enrichment Limited, are used as vehicles for financing particular sections of the project.

They are BNFL Enrichment (Plant and Equipment) Limited, BNFL Enrichment (Operations) Limited, BNFL Enrichment (Operations-UK) Limited (96% partner in Urenco (UK)), and BNFL Enrichment (Operations-Europe) Limited (2% partner in Urenco Nederland and Urenco Deutschland).

Related Companies

Centec GmbH

Incorporated in Germany in 1971. Its main purpose is to co-ordinate the development in the laboratories in the three countries of plant for the enrichment of uranium by the centrifuge process.

BNFL holds one-third of the shares. The remainder are held by Netherlands and German organisations.

Urenco Limited

Incorporated in England in 1971. Its main purpose is the marketing of enriched uranium produced in enrichment plants using the centrifuge process.

BNFL holds one-third of the shares. The remainder are held by Netherlands and German organisations.

Combustibili Nucleari SpA

Incorporated in Italy in 1967 for the purpose of manufacturing and supplying fuel and fuel components and providing related services, including reprocessing for nuclear power stations.

BNFL holds half of the shares. The remainder are held by an Italian Company.

Nukleardienst GmbH

Incorporated in Germany in 1964 for the purpose of providing nuclear fuel services for AGR type reactors built in that country or in certain other European countries.

BNFL holds half of the shares. The remainder are held by a German Company.

Pacific Nuclear Transport Limited

Incorporated in England in 1975. Its main purpose is the transport of irradiated fuel from Japan to Europe. BNFL holds 62½% of the shares. The remainder are held by Japanese and French organisations.

United Reprocessors GmbH

Incorporated in Germany in 1971 for the purpose of marketing and providing services for the reprocessing of irradiated fuel from nuclear power stations using uranium oxide fuel.

BNFL holds one-third of the shares. The remainder are held by French and German organisations.

Nuclear Transport Limited

Incorporated in England in 1972 for the purpose of providing services for the transport of irradiated nuclear fuel elements from oxide-fuelled power reactors to reprocessing plants.

BNFL holds one-third of the shares. The remainder are held by French and German organisations.

NTL - Nukleare Transportleistungen GmbH

Incorporated in Germany in 1979 for the purpose of providing services for the transport of irradiated nuclear fuel elements from oxide-fuelled power reactors to reprocessing plants.

BNFL holds one-third of the shares. The remainder are held by French and German organisations.

NTL-Société Nucléaire Pour Les Transports Lourds SARL

Incorporated in France in 1983, for the purpose of providing services for the transport of irradiated nuclear fuel elements from oxide-fuelled power reactors to reprocessing plants.

BNFL holds one-third of the shares. The remainder are held by French and German organisations.

BRITISH NUCLEAR FUELS plc
Consolidated Current Cost Profit and Loss Account
 FOR THE YEAR ENDED 31 MARCH 1985

	Note	1985		1984
		£M	£M	£M
Turnover		545.1		459.5
Less Net Operating Costs and Expenses		406.9		334.7
Operating Profit on historical cost basis		138.2		124.8
Less Research and Development Written Off		3.8		8.5
		134.4		116.3
Income from Fixed Asset Investments		0.8		1.4
Profit before Financial Charges and Taxation on the historical cost basis		135.2		117.7
Less Current cost operating adjustments	2	64.2		53.0
Current cost profit before gearing adjustment, financial charges and tax		71.0		64.7
Gearing adjustment	5	42.8		33.9
Financial charges		(66.8)		(46.9)
		(24.0)		(13.0)
Current cost profit on ordinary activities before tax		47.0		51.7
Tax on profit on ordinary activities		11.0		18.1
Current cost profit on ordinary activities after tax		36.0		33.6
Profit attributable to Minority Interests		2.9		0.5
Current cost profit for the Financial Year		33.1		33.1
Dividends		16.3		16.3
Retained current cost profit for the year		16.8		16.8
Statement of Retained Profits/Reserves				
Retained current cost profit for the year		16.8		16.8
Movements on current cost reserve	4	23.6		18.9
Movement on other reserves		(0.1)		(0.2)
		40.3		35.5
Retained profit/reserves at the beginning of the year		299.9		264.4
Retained profit/reserves at the end of the year		340.2		299.9

The notes on pages 60 and 61 form an integral part of the accounts.

The Auditors' Report is on page 40.

BRITISH NUCLEAR FUELS plc
Summarised Consolidated Current Cost Balance Sheet
AS AT 31 MARCH 1985

	Note	1985		1984
		£M	£M	£M
Assets Employed				
Fixed Assets:				
Tangible Assets	3	1,602.8		1,294.5
Investments		8.0		7.5
		1,610.8		1,302.0
Net Current Assets/(Liabilities)				
Stocks		202.7		200.8
Debtors		207.0		142.7
Trade creditors, accruals and deferred income falling due within one year		(192.6)		(182.2)
		217.1		161.3
Proposed dividend		(12.3)		(12.3)
Other net current assets/(liabilities)		(71.2)		(44.9)
			133.6	104.1
Total assets less current liabilities		1,744.4		1,406.1
Financed by				
Creditors: amounts falling due after more than one year		875.7		665.7
Provisions for liabilities and charges		269.5		208.4
Accruals and deferred income		205.2		181.3
Capital and Reserves:				
Called up Share Capital		32.7		32.7
Current Cost Reserve	4	241.1		217.5
Other Reserves		0.4		0.5
Profit and Loss Account		98.7		81.9
			372.9	532.6
Shareholders' Interest			21.1	18.1
Minority Interests		1,744.4		1,406.1

The notes on pages 60 and 61 form an integral part of the accounts.

The Auditors' Report is on page 40.

Notes on the Current Cost Accounts

1 Basis of Preparation

The current cost accounts have been prepared by reference to current cost principles in conformity with SSAP 16. The accounting policies used in preparing the historical cost accounts have been adopted in the current cost accounts except where adjusted by reference to current cost principles as set out below.

a Fixed Assets

The Group's fixed assets fall into two categories:

i. Assets acquired to meet specific contracts, the cost of which assets will be met by the customer over a period of years; these are referred to as contractually committed assets;

ii. Other fixed assets.

It is considered that the impact of inflation on the Group is best reflected by treating contractually committed fixed assets as monetary assets and showing them at their historical cost net book values, this amount being the proportion of the cost of the assets remaining to be recovered from the customers. The adjustment relating to these assets reflects the change due to inflation in the need for funds to finance such assets except to the extent that they are specifically financed by advance payments from customers, and is computed by reference to their historical cost net book values using an appropriate Government price index of general application.

Other assets are stated at the lower of their net current replacement costs using appropriate Government indices or their recoverable amounts and corresponding depreciation adjustments have been made.

b Working Capital

Stocks and work in progress which will be replaced are stated at estimated current replacement cost. Those which will not be replaced are stated at historical cost. Monetary working capital comprises debtors less trade creditors and accruals and deferred income falling due within one year, and provisions for liabilities and charges other than deferred taxation. Replacement costs and the cost of sales and monetary working capital adjustments have been based on records of changing prices maintained by the Group or appropriate Government indices. The cost of sales adjustment has been arrived at, in part, using the averaging method. No cost of sales adjustment has been made in respect of stocks which will not be replaced. These are excluded from net operating assets and offset against net borrowings in note 5 to the current cost accounts.

c Gearing Adjustment

The gearing adjustment is based on the average gearing during the year, calculated on a Group basis.

	1985	1984
2 Adjustments made in deriving current cost operating profit	£M	£M
Cost of Sales	2.8	5.6
Monetary Working Capital	(13.8)	(10.1)
Working Capital	(11.0)	(4.5)
Fixed Assets-Contractually Committed	60.0	40.2
-Others	15.2	17.3
Current Cost Operating Adjustments	64.2	53.0

	1985			1984		
	Gross	Depreciation	Net	Gross	Depreciation	Net
3 Fixed Assets	£M	£M	£M	£M	£M	£M
Land and Buildings	220.8	64.8	156.0	188.5	51.7	136.8
Plant and Machinery	929.2	344.1	585.1	743.9	272.7	471.2
Assets in Course of Construction	861.7	—	861.7	686.5	—	686.5
	<u>2,011.7</u>	<u>408.9</u>	<u>1,602.8</u>	<u>1,618.9</u>	<u>324.4</u>	<u>1,294.5</u>

The net figure includes £1,210.6M (1984 £926.4M) assets which are contractually committed.

BRITISH NUCLEAR FUELS plc

Notes on the Current Cost Accounts continued

	1985		1984	
	£M	£M	£M	£M
4 Current cost reserve				
Revaluation surplus reflecting price changes:				
Land and Buildings	0.7		1.6	
Plant and Machinery	18.6		17.5	
Assets in Course of Construction	5.1		(1.8)	
Investments	—		0.1	
Stocks and Work in Progress	(1.9)		2.2	
Government Grants	(4.3)	18.2	(1.8)	17.8
Contractually Committed Assets adjustment		60.0		40.2
Cost of Sales adjustment		2.8		5.6
Monetary Working Capital adjustment		(13.8)		(10.1)
Gearing adjustment		(42.8)		(33.9)
Minority Interests		(0.8)		(0.7)
Movement in Year		23.6		18.9
Balance at Beginning of Year		217.5		198.6
Balance at End of Year		<u>241.1</u>		<u>217.5</u>
of which: realised		87.9		67.4
unrealised		<u>153.2</u>		<u>150.1</u>
		<u>241.1</u>		<u>217.5</u>
	1985		1984	
	£M	£M	£M	£M
5 Financing of net operating assets				
Fixed Assets (net of Regional Development Grants and specific advance payments from customers)		1,298.7		1,077.9
Investments		8.0		7.5
Working Capital		(38.6)		(36.9)
Net Operating Assets		<u>1,268.1</u>		<u>1,048.5</u>
Share Capital and Reserves		372.9		332.6
Proposed Dividend		12.3		12.3
Total Shareholders' Interest		385.2		344.9
Minority Interests		21.1		18.1
Loans	529.4		393.5	
Non-specific advance payments from customers	233.5		220.5	
Deferred Tax	13.8		10.2	
Government Grants	13.9		16.4	
Other Net Current Liabilities	71.2		44.9	
Net Borrowing		<u>861.8</u>		<u>685.5</u>
		<u>1,268.1</u>		<u>1,048.5</u>

The gearing adjustment is based on the proportion of the net operating assets that were financed by net borrowing during the year.

BRITISH NUCLEAR FUELS plc
Financial Statistics

	1985	1984	1983	1982	1981
	£M	£M	£M	£M	£M
Assets Employed					
Fixed Assets	1,464	1,162	912	682	467
Net Current Assets	113	82	53	102	134
	<u>1,577</u>	<u>1,244</u>	<u>965</u>	<u>784</u>	<u>601</u>
Financed By					
Loans and Advance Payments	876	666	508	418	304
Provisions for liabilities and charges	269	208	153	125	109
Government Grants	193	171	141	114	91
Share Capital	33	33	33	33	33
Profit and Loss Account and Reserves	187	150	115	82	56
Shareholders Interest	220	183	148	115	89
Minority Interest	19	16	15	12	8
	<u>1,577</u>	<u>1,244</u>	<u>965</u>	<u>784</u>	<u>601</u>
Turnover and Profits					
Turnover:					
Nuclear Fuel Services—Home	358	311	304	299	273
—Export	128	91	92	68	41
Electricity	59	58	55	46	35
	<u>545</u>	<u>460</u>	<u>451</u>	<u>413</u>	<u>349</u>
Operating Profits	138	125	114	91	64
Financial Charges	(67)	(47)	(49)	(46)	(36)
Profit before Tax	68	71	54	35	16
Profit for the Financial Year	53	51	45	30	13
Dividends	16	16	13	4	3
Profit Retained	<u>37</u>	<u>35</u>	<u>32</u>	<u>26</u>	<u>10</u>
Profit for the Financial Year as a Percentage of Average Shareholders Interest	27%	31%	34%	29%	15%

NOTE: The above figures have been fully restated from those published in the annual accounts not only for the presentational effects of the 1981 Companies Act but also: 1981 and 1982—to include the adjustment on Provisions for Liabilities and Charges to reflect known changes in price levels as Financial Charges.

BRITISH NUCLEAR FUELS plc
Notice of Meeting

The FOURTEENTH ANNUAL GENERAL MEETING of British Nuclear Fuels plc will be held at 1 Hobhouse Court, Suffolk Street, London SW1Y 4HH, on Thursday, 5 September, 1985 at 10 am for the following purposes:

- 1 To receive and consider the Directors' and Auditors' Reports and the Statement of Accounts for the year ended 31 March, 1985;
- 2 To declare a final dividend;
- 3 To re-elect Directors appointed prior to the Meeting;
- 4 To re-appoint Coopers & Lybrand as Auditors under section 384(1) of the Companies Act 1985;
- 5 To authorise the Directors to fix the remuneration of the Auditors;
- 6 To transact any other ordinary business proper to an Annual General Meeting.

By order of the Board

H E Bolter
Secretary

Risley, Warrington
5 August 1985

Note

A member entitled to attend and vote at the above meeting may appoint one or more proxies to attend and vote in his stead. A proxy need not be a member of the Company.

Registered Office
Risley, Warrington, WA3 6AS.

Auditors
Coopers & Lybrand
Abacus House, Gutter Lane,
Cheapside, London EC2V 8AH.

Bankers
National Westminster Bank plc
55 King Street,
Manchester M60 2DB.

Solicitors
Freshfields
Grindall House,
24 Newgate Street,
London EC1A 7LH.

Alsop Stevens
India Buildings,
Water Street,
Liverpool L2 ONH.

The categories of radio active wastes, based on advice from the Radioactive Waste Management Advisory Committee, are as follows:-

- i. **High level (heat generating waste) wastes**, which are defined in the UK as those wastes in which the temperature may rise significantly as a result of their radioactivity so that this factor has to be taken into account in designing storage or disposal facilities.
- ii. **Low level wastes**, which are wastes containing radioactive materials other than those acceptable for dustbin disposal (very low level) but not exceeding 4 GBq/te alpha or 12 GBq/te beta/gamma.
- iii. **Intermediate level wastes**, which are wastes with radioactivity exceeding the boundaries for low level wastes, but which do not require heating to be taken into account in the design of storage or disposal facilities.