PETROLEUM REVIEW

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August 1995

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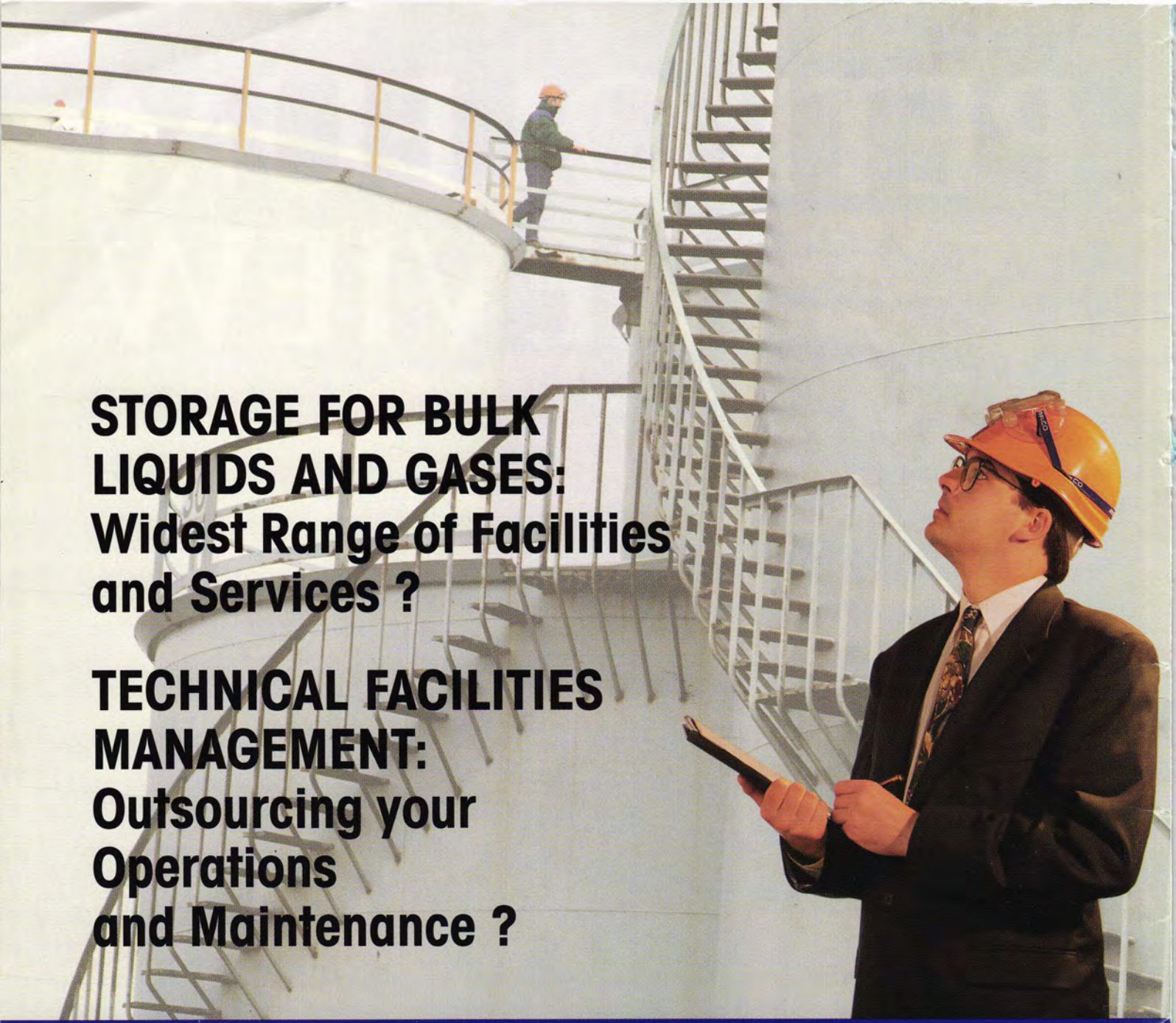

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COVER PHOTO
Inspection staff look for dangerous gas

'At the present date the average weekly consumption of petrol may be taken at 9,000 tons per week'

Petrol supply and distribution in Britain in 1919

Amongst the hitherto secret files recently opened to public access by the government is a report on the distribution of petrol supplies in 1919. (Public Record Office HO 144/5989/409521). In the aftermath of the Russian Revolution and the short-lived Soviet regimes in Hungary and Bavaria, the British government foresaw the possibility of large-scale civil disturbances that would paralyse the normal life of the United Kingdom and would necessitate energetic counter-measures. Petrol supply was identified as one of the economic sectors most at risk.

The available documents provide no information regarding the official discussions that led to the preparation of this report. There are one or two documents of a slightly later date, including, a memorandum sent by the Admiralty to the Home Office in January 1920, which is printed here. One assumes that there are also later files, up-dating information and elaborating contingency plans, and that somewhere in Whitehall there is a current file on this subject, but the existence of such material is still an official secret.

The extent to which the increasingly complex structure of a modern industrial society involved 'bottlenecks' which provided attractive targets for foreign or domestic enemies was still a recent discovery in 1919. The idea that the 'nerve-centres' of a community were vulnerable to 'a single well-directed blow' was first put forward by Lord Montagu of Beaulieu in 1909 and seems to have been inspired by HG Wells's description of the bombing of New York by German airships in his novel *The War in the Air* of 1908.

The British Admiralty became interested in the possibility of disrupting the economic life of an enemy nation by interfering with supplies of strategic raw materials at about the same period. The notion that the communications network of an army in the field represented a vulnerable bottleneck seems to have occurred to German and British military planners only in 1918.

The following report serves to remind us that with the increased complexity and specialisation of industrial activity since 1945 economic bottlenecks have become both more numerous and more exposed, both at the national level and in the case of individual business enterprises.

This report provides a unique overview of the petroleum supply industry in Britain 75 years ago. One imagines that a document giving comparable detail of the situation today would be vastly longer!

AD Harvey

Report on Distribution of Petrol Supplies

The report following is prepared from data provided by the principal Importers and Distributors of Petrol in Great Britain comprising:

The Shell Marketing Co. Ltd
The Anglo American Oil Co. Ltd
The Bowring Petroleum Co. Ltd
The Union Petroleum Co. Ltd

Preliminary

The above-named companies own and operate separate organisations through which is distributed about 96 percent of the petrol consumed in this country. The only other company having a separate distributing organisation is the Gas Lighting Improvement Company but this concern does not import petrol directly, and its officials have always been desirous of falling in readily with the requirements of HM Government when requested to do so.

Sea board Installations

The principal storages into which ocean tankers discharge directly petrol in bulk are situated at:

SE	London District – Thames Haven, Essex
W	Bristol District – Avonmouth & Portishead
NW	Barrow in Furness
E	Hull District – Saltend, NER.
N	Scotland – Granton & Grangemouth, Firth of Forth

Storages of lesser capacity are found at:

Portslade (Brighton)
Plymouth
Preston
Cardiff
Newcastle
Sunderland
Lowestoft
Carnarvon
Birmingham)- Special as referred to later
Manchester)-

Stocks of petrol in store at ocean installations and afloat

The stocks held by the combined companies at 15 July 1919 were:

At ocean Installations 130,00 tons.
Afloat for July arrival 20,000 tons (not including very large stocks of government petrol in store)

The stocks kept at the lesser seaboard storages are generally transferred thereto from ocean installations by small coasting tank vessels, these storages being usually the capital town of a branch area centre, from whence deliveries in bulk and package are made to local depots tributary to the branch area concerned.

NB The consumption in England, Scotland and Wales of imported petrol per month may be estimated at 36,000 tons.

It will be observed therefore that the stocks in store at main installations representing about four months' consumption, present no cause for anxiety as to the adequacy of supplies.

Branch areas and depot areas

The distributing organisations of the companies divide the country into branch areas, each, as far as possible, deriving its supplies from the ocean installation nearest thereto. The inland filling depots are supplied in bulk by means of rail tank wagons and barges, where can-filling arrangements are available, but large quantities of petrol in 2 gallon cans and steel barrels are also supplied from seaboard installations to local depots which are unable to fill from bulk.

The stocks of petrol in store at inland depots at this date cannot be accurately given but approximately it would amount to 30,000 tons, equal to 9,000,000 gallons.

At the present date the average weekly consumption of petrol may be taken at 9,000 tons per week, in which figure is included the requirements of the London General Omnibus Company. It is estimated that the inland depots' stocks without replenishment would not last for a longer period than 10 days.

It must however be borne in mind that this is an average basis, and in practice some depots would not hold out for so long whilst others would hold out somewhat longer.

There are floating stocks in the hands of garages, commercial users and motor traders but no data are available for the estimation of such stocks or for those in private users' hands, which in the event of emergency could be made use of. These are generally estimated as follows:

Private holders	2,000,000 gals
Garages	2,000,000 gals

There is also a large quantity of benzole in stock at various points which could be drawn upon but information on this point is not available to the oil companies. It is however certain that the principal supplies of benzole are manufactured in the Midland and Northern Districts, and the stocks in producers' hands must be considerable and also favourably situated for application to the purposes under consideration.

The maintenace of petrol supplies to inland depots and centres of consumption is dependent upon the continuance of traffic in bulk by:

a. Rail tank waggons
b. Tank barges (on the Thames between Thames Haven and London delivery depots in the metropolis)
c. Road tank wagons

and also upon

d. The continued supply of 2-gallon cans, wooden cases, and steel barrels from ocean installation and other filling points, and the return of the packages thereto for re-filling.

Rail tank waggons

The rail tank waggons at the disposal of the oil companies are capable of transporting by rail about 5,500 tons per week but the full capacity for delivery is reduced by the cars loaned to the government for service in France (200), the majority of which have not yet been returned for commercial service.

The effective employment of railway tank waggons necessarily depends upon the rate at which the completed journeys can be performed. It is reported that the average duration of the tank waggon's journey is now as much as 10 days.

In this connection some months ago the Railway Executive Committee was strongly urged by Sir Hamar Greenwood to issue instructions calculated to expedite petrol traffic on the railways to the utmost possible extent. The oil companies however contend that there are no evidences of these instructions having effected the desired result, and generally complain that the railway companies do not appear to regard the spirit traffic as being of the importance it was represented to them to be, the result being to hamper the efforts of the oil companies in the fullest stocking-up of inland depots.

Tank barges

The tank barge traffic is absolutely necessary to maintain supplies consumed in London and the surrounding district.

On this point it should be urged that some attention should be directed to the supplies of petrol and kerosene required for the omnibus services in the metropolitan area. These supplies are first transported from the main installation by tank barges and are delivered by tank road vehicles from delivery depots in the east and west of London. The depots in the east of London involve haulage through the area of docks to the various garages of the London General and other omnibus companies' commercial consumers.

The maintenance of the omnibus services would therefore depend not only upon the maintenance of tank barge traffic to the depots but also upon means being taken to ensure the safe passage of the road vehicles, in most cases horsed, from the depots to the omnibus companies' garages.

Road bulk vehicles

The tank road waggons (motor vehicles) at the disposal of the combined companies number 214 being in service throughout the country and having a total capacity of 168,000 gallons, or 560 tons.

Packages

It is assumed that no opportunities would present themselves for the conveyance of empty packages back to the filling points and therefore this form of distribution could not be relied upon after the packed

stocks had once been consumed. The result would be that dealers' stocks and many of the stores holding supplies of canned petrol could not be replenished.

Stocking of inland depots

In February of the present year, for the purposes of emergency, stocking-up of all spirit depots to the extent of 50 percent above the quantities licensed by the Local Authorities was authorised by the Home Office, and many of them are so stocked today. There are, however, many centres of consumption where the demand necessitates much more rapid replenishment of stocks and at such points the maintenance of increased stocks is hardly practicable – indeed it is difficult to see how these could be kept going if traffic by rail were cut off, as no considerable volume of tank storage at such places is available.

To deal with this, arrangements were made to provide tankage at Birmingham and Manchester and reserve stocks of petrol amounting to 900 tons at Birmingham and 2,200 tons at Manchester were transferred from ocean installations. Those stocks still remain in reserve for the purpose in view.

At the same time secret information was issued to the companies' branch managers, in accordance with the Memorandum appended, and instructions were issued thereon as to the action to be taken in the event of the emergency arising. These instructions will be put in order and brought up to date as soon as the modified instructions have been fowarded to the companies.

Maintenance of supplies to inland depots

It is considered that the maintenance of the necessary supplies of petrol at inland depots could not be depended upon for even a period of three weeks without some reliance upon rail tank car traffic. A considerable quantity could be handled by road tank waggons but in this connection the companies are somewhat handicapped by the large number of motor tank waggons which are under repair and for the time being not available. The difficulty of obtaining spare parts for such vehicles and the shortage of skilled labour is a serious handicap and some assistance from HM Government in this connection would materially help the situation.

The extent to which spirit could be delivered in road tank waggons for the replenishment of inland depots would necessarily depend upon the drivers remaining at their posts or alternatively suitable substitutes being obtained.

Protection

In any case it is considered that unless adequate protection were provided to the drivers, an efficient service by road vehicle could not be depended upon.

Generally on the question of protection, a list of the Bulk Supply Depots with their location is being compiled and will be furnished as speedily as the information can be obtained from the companies. A list of Can Depots (not filling) will also be supplied.

(Signed) AC Adams
London 25 July 1919

Petrol Aviation and M.T.

It should be noted that the large bulk stocks of petrol in this country are now the property of either of the following:

a. War Office or
b. Trade contractors and distributors

The Admiralty and the Air Ministry have practically only comparatively small stocks at stations and draw on (a) and (b) for supplies and replenishments as required.

The War Office main stocks are held in bulk at the large trade installations distributed over the country at places like Portishead, Thames Haven, Barrow, Fulham etc at which installations are also held the trade contractors' main stocks but the latter also have in addition supplies at inland distributing depots situated all over the country. The actual stock position as regards the government (War Office) bulk reserve at these installations at the moment is that total stocks as under are held:

Aviation Spirit	26,000 tons (8,060,000 gallons)
M T	44,600 tons (13,826,000 gallons)

As regards the trade contractors etc stocks the total of those is not known but that the quantities of petrol at present in this country are extremely large is evidenced by the fact that there are actually now two tankers in the Thames with full cargoes and no tankage available for discharging owing to very heavy stocks held at all the main ocean installations and inland depots.

With regard to the RAF in particular, the rough basis for stocks at stations is 14 days reserve on present consumption but this is, particularly in the case of MT petrol, very approximate and stocks vary from day to day. A departure from the usual 14 days reserve sliding scale was made in March last when it was decided on paper D/23532 that, in view of possible eventualities, certain selected stations were to be filled to their utmost capacity both with Aviation and MT petrol. A list of these stations is annexed and the instructions as to keeping them stocked to full capacity are still in force at stations which have not been closed down in the interim. The total stocks of petrol held at present under both the above arrangements, by RAF stations according to latest returns is:

Aviation Petrol – some 2,100 tons (651,00 gallons)

MT Petrol – Actual quantities not exactly known but 14 days stock on present consumption should be held - about 500 tons (155,000 gallons).

The Under Secretary of State, HOME OFFICE

Secret

Sir,

With reference to your letter of the 15 December, No 377100/177, regarding the provision of Police protection in emergency for petrol depots in the Thames, I am commanded by My Lords Commisioners of the Admiralty to acquaint you, for the information of the Secretary of State for Home Affairs, that it has been ascertained from the Power, Transport and Economic Department of the Board of Trade that, in view of the immense importance of supplies in the London area and of the extent to which the country for some distance round London is dependent upon supplies by the Thames, it is considered that it will be seriously detrimental if the following depots on the river are not maintained in operation during an emergency, namely:

Thames Haven Oil Wharves	
Abbey Mills, West Ham	Shell Marketing Co Ltd
Angerstein Wharf	Shell Marketing Co Ltd
Manhattan Wharf	Thames Haven Oil Co
'Shell' Wharf, Fulham	Thames Haven Oil Co
Purfleet Works	Anglo-American Oil Co Ltd
Silvertown Works	Anglo-American Oil Co Ltd
Angerstein Works	Anglo-American Oil Co Ltd
Hammersmith Works	Anglo-American Oil Co Ltd
Bromley (on the River Lea)	Anglo-American Oil Co Ltd
Edmonton (on the River Lea)	Anglo-American Oil Co Ltd
Chalk Farm Depot(Grand Junction Canal)	
Camberwell Depot (Surrey Commercial Canal)	
Battersea Wharf, W. Ham	Union Petroleum Co Ltd
Pacific Wharf, W. Ham,	Gas Lighting Improvement Co Ltd
Max Wharf, Grosvenor Road,SW	Anglo-Mexican Petroleum Co Ltd

2. My Lords request that the Secretary of State may communicate the names of these depots to the Police Authorities concerned, in order to enable the necessary arrangements for their protection to be made when the Thames Petrol Service (UC Scheme No 9, vide Admiralty letter M.04425 of the 25 November 1919) is put in force. This request is made as My Lords do not in all cases know under which Police jurisdiction these various depots come.

3. My Lords think it proper to state that they themselves have no direct interest in these depots. Their only connection with them is that the Admiralty have agreed, in certain circumstances, to transport the petrol by water, ie to run the petrol barges to the depot wharves. If the Admiralty do this, the depots and wharves will require Police protection, as it is essential that the barges, manned by naval ratings, be protected at the wharves. Whilst the Navy is not concerned with the protection of the petrol, neither can the petrol companies be considered as being interested in the provision of protection to the petrol when UC Scheme 9 is in force.

I am, Sir,

Your obedient Servant,

Alex Hirst,

NEWS IN BRIEF

20 June
Ofgas has ordered British Gas to scrap an advertisement campaign which offered cheaper prices for businesses spending more than £1,100 a year.

23 June
Repsol has won a new permit for exploration and exploitation of hydrocarbons in the East Bahariya block in the Western Desert of Egypt.

The US oilfield service companies, Weatherford International and Enterra Corporation, are to merge to form a firm with assets totalling $1 billion.

Alliance Gas has stepped into the gap left when Scottish Power pulled out of its 15-year supply deal with Statoil, by agreeing to buy short-term supplies from the Norwegian gas field, Froey.

26 June
Amoco Canada has made a bid for the Canadian firm, Home Oil, for $16.50 a share.

27 June
British Gas is to stand trial over a gas explosion at a home in Inverness. Pensioner James Ross was burnt in the blast and spent several days in intensive care.

The Crown Prince of Qatar has ousted his father as Emir in a bloodless coup. Energy policy under the new ruler, Sheikh Hamad bin Khalifah Al-Thani, is not expected to undergo any radical changes.

A bill has been introduced into the Commons which would alleviate the tax paid on investments into innovative environmental technologies.

28 June
British Gas has acquired a 35 percent working interest in the Caipipendi exploration block, located in the southern Sub Andean Basin of Bolivia.

Iran claims to have found new customers for its crude oil, following Washington's US trade embargo. Oil minister Gholamreza Aghazadeh said that agreements had been reached with Italy, Spain, France and Portugal.

Norsk Hydro has announced a major upgrade of the Troll oilfield which more than doubles recoverable reserves to over 1bn barrels. The field is now the sixth largest in Norway.

The Chairman of Total, Thierry Desmarest, has denied rumours of a merger with Elf. In an interview with the French newspaper, *Les Echos*, he said there would have to be 'an extraordinarily strong motive for us to accept the price of such an operation'. He added that Total was 'not currently in that situation'.

29 June
Amerada Hess is seeking tenders for 'fast track' development proposals for the the Dauntless and Durward fields in the central North Sea.

30 June
British Gas has been granted a year-long reprieve from pricing its gas according to published schedules. During the suspension period, Ofgas will carry out a further study with a view to removing the schedules altogether.

Chevron UK announced that two structural defects had been discovered on the jacket of the Ninian southern platform. Production is not expected to be affected.

2 July
The partners of the $15bn Sakhalin-1 project have signed a long-overdue production sharing agreement. The deal, which brings Russian and Sakhalin Island authorities and oil companies together with Exxon and Sodeco, covers the development of three fields 20 miles off the north-eastern coast of Sakhalin Island.

3 July
Death threats have been sent to several oil companies operating in the Philippines. The Communist rebel group, Alex Boncayao Brigade, has threatened to kill top executives at Shell, Caltex, the Philippine National Oil Company and the Energy Regulatory Board if plans to increase petrol prices are carried out.

Proposals for new regulations to cover the safe management of flow in Britain's gas supply network have been published by the Health and Safety Commission.

4 July
The UK government has issued exploration permits for 53 of the 56 blocks applied for in the second phase of the 16th Offshore Licensing Round. The first phase of the Round took place in May when 26 blocks west of Shetland were 'fast-tracked' to allow companies to take advantage of summer weather.

British Gas has confirmed plans to close its London headquarters at Rivermill House and move around 2,000 staff to Reading. Another 80 top executives, including Chief Executive Cedric Brown, will relocate to new offices in the Adelphi building, close to the Strand.

5 July
The Venezuelan Congress has approved radical plans which would open up 10 oilfields to exploitation by private companies. The plans, submitted by PdVSA, will allow foreign equity investment in exploration and production for the first time since nationalisation of the petroleum industry in 1976.

An Alabama judge has ruled that a $7bn class action lawsuit against Shell and Hoechst over plumbing systems that used polybutylene should go ahead. The writ alleges that plumbing produced by the two companies has damaged many homes in Alabama, Texas and Illinois.

Ecopetrol has received $700m in credit from seven foreign banks which will go towards the construction of a pipeline linking the Cusiana oilfield and the Caribbean coast.

The government of British Columbia has introduced legislation which will pave the way for the restructuring of Vancouver Island's natural gas pipeline project.

6 July
The Oceaneering diving support vessel, *Ocean Stephaniturm*, hit Shell UK's Inde K gas platform in the southern North Sea. None of the 66 people on board were injured.

Elf Enterprise Caledonia is to axe up to 300 UK jobs as part of a cost-cutting exercise aimed at reducing the company's operating costs by 30 percent over the next two years.

Elf has abandoned plans to explore for gas reserves in the environmentally-sensitive area of Waddenzee, off the Dutch coast. The company denied its decision was a response to pressure from environmental groups.

7 July
Azerbaijan is urging Iran to decide whether or not it will take up the offer of a share in the Caspian Sea oil project. According to the Azeri Turan news agency, SOCAR President Natig Aliyev said it would 'be expedient if Iran hurried to make its decision'.

South Africa's oil industry association, SAPIA, has walked out of a crucial business policy forum over a proposal to continue tariff protection for Sasol's synthetic fuels operation.

Clyde Petroleum is to sell a 10 percent interest in three UKCS blocks to Cairn Energy for £35.7m. The deal includes a stake in the Gryphon field.

10 July
Total has signed an exploratory agreement with Oman, covering the Siwan concession which is 26,000 sq km in size. The deal involves a minimum investment of $66m over a period of nine years.

US Deputy Energy Secretary, William White, has resigned from the energy department. His departure is believed to be linked with President Clinton's plans to radically reduce the size of the department.

Mobil has signed a deal with Elf Aquitaine to buy its entire Dutch retail network *(see Newsdesk, May issue)*.The 72 stations will be integrated with Mobil's existing network of 274 outlets by the end of the year, boosting Mobil's share of the Dutch market by one percent, to 10.5 percent.

A BHP bulk carrier grounded off the northern coast of Tasmania, rupturing three of its bottom tanks containing around 300 tonnes of fuel oil. Maritime officials reported an oil slick covering eight kms of shoreline. The 37,557 dwt vessel has a total of 550 tonnes of bunker fuel on board, together with a cargo of manganese ore.

NEWS IN BRIEF

Britain is likely to be disposing of 32 more oil and gas platforms by the turn of the century, according to Energy Minister Tim Eggar. Of these, 19 will be dismantled onshore, but the method of disposal for the remaining 13 has not been decided.

11 July

JKX Oil & Gas announced that a public offer tied to floating on the London Stock Exchange was over-subscribed 2.1 times.

Royal Dutch/Shell, Agip and Conoco have agreed to buy a 49 percent stake in the Czech refineries of Chemopetrol and Kaucuk in northern Bohemia. The consortium will pay $173m, while Unipetrol will retain a 51 percent stake. Earlier in the month, the deal had been thrown into doubt when Total pulled out from the consortium .

PdVSA and Petrobras have agreed to form joint ventures in various projects around the world, with a view to creating a 'loose association' with the name Petroamerica.

Norsk Hydro said a major drop in recoverable reserves from the Lille-Frigge field over the past year will almost certainly result in an extraordinary writedown in the company's second quarter results.

The now famous Brent Spar loading buoy arrived at Erfjord, the Norwegian fjord which will act as a temporary haven until Shell decides how to dispose of the platform. The Norwegian government has granted Shell a year's breathing-space to conduct further decommissioning studies – a process expected to take 'many months'.

The Chairman of British Gas, Richard Giordano, resigned from the company's remuneration committee just six days before publication of the Greenbury committee's report in order to head off any concerns over his independence. Mr Giordano's decision is directly related to the report, which will recommend that executive pay should be decided by a committee of independent, non-executive directors.

12 July

Det Norske Veritas is to conduct an independent inventory on the Brent Spar to 'provide further independent verification of its contents'. Greenpeace will be asked to provide detailed documentation to substantiate their allegations over the materials on board.

New rules covering the design and construction of offshore installations and wells have been proposed by the Health and Safety Commission. This latest raft of reforms completes the watchdog's all-encompassing review of offshore legislation following the Cullen report.

Brent Spar may still be disposed of at sea, Energy Minister Tim Eggar told the Commons. Insisting that the only victims would be worms on the seabed, Mr Eggar said he would 'not rule out the option of deep sea dumping in the future'.

13 July

Granada Group has been ordered to sell some of its service stations by Trade and Industry Secretary Ian Lang or face an MMC inquiry into its acquisition of Pavilion Services. The takeover, which took place last April, brought Granada's motorway service outlets to 27.

British Gas and Edison Gas have won an exploration and production permit for 12,000 sq kms in the northern part of the Red Sea. The $26m deal will last 11 years and involve the drilling of five wells.

Royal Marines were on standby during the occupation of Brent Spar last month, ready to recapture the buoy if ordered. UK Army Minister Nicholas Soames admitted in Parliament that military personnel 'would have become involved if the police had requested it'.

14 July

Sir Peter Morrison, UK Energy Minister at the time of the Piper Alpha disaster, has died of a heart attack at 51. The Chester MP, who was at the Energy Department from 1987 to 1990, played an instrumental part in improving the offshore industry's safety regime.

Shell Petroleum has signed an agreement to purchase a further 14 percent of shares in Shell Cote d'Ivoire from state oil company Petroci. This will increase the company's holding to 64 percent.

Clyde Petroleum and BP have agreed a straightforward asset swap in the North Sea, under which Clyde acquires a seven percent interest in Ross while BP gains Clyde's 27.71 percent interest in Buchan and its 4.59 percent stake in Ettrick.

Petronas is to float its gas supply arm on the stock market for M$3.2bn.

Elf Exploration and Marathon Oil have been awarded a total of six blocks in the Isle of Man's first offshore licensing round.

15 July

The SNP has called for the creation of an independent and impartial commission to oversee the disposal of rigs in the UKCS.

17 July

World oil prices hit a seven-month low, with Brent Blend crude oil futures for September delivery trading at as little as $15.71 per barrel.

Halliburton Company has agreed to plead guilty in the US Federal Court in Houston to three charges of violating US export control law. The case follows the export of tools to Libya by former subsidiaries of the company during the late 1980s.

Bond Helicopters of Aberdeen has unveiled an upgraded North Sea fleet, which include a new liferaft deployment system and payload modifications. The two-year, £5m project was a response to the Cormorant Alpha disaster of 1992.

Burmah Castrol announced that its chemicals division, Foseco, has acquired Praxair's aluminium degassing business for $10.7m.

Petronas has announced a 'significant discovery' off Malaysia's northeast coast in block PM12.

A new House of Lords report has backed gas as the transport fuel of the future by calling for a major tax break for the 'green' fuel.

Victoria Petroleum has announced that the Sophia Jane-1 offshore well in southern Australia has been plugged and abandoned with no shows.

18 July

The Nigerian government has warned both BP and Shell that their operations may suffer if the British government continues to attack Head of State, General Sani Abacha. Nigeria is under immense international pressure over the conviction of 40 people, including a former head of state, for an alleged coup attempt. It is believed that some will be executed as a result.

Public fears over the frequency and volume of tanker spills at sea are 'exaggerated', according to a new report from the International Tanker Owners Pollution Federation. The study points out that tanker accidents accounted for just 12 percent of oil discharges in 1981, the last year in which full estimates were available.

BP and Statoil have announced their third significant gas find in the Nam Con Son Basin, off the coast of Vietnam.

JKX Oil & Gas, which recently announced plans for a Stock Exchange Listing, has commenced trading.

19 July

A joint venture of Japanese companies, known as Wandoo Petroleum, has acquired a 40 percent stake in an offshore oil block 65 km off the coast of Western Australia.

Intertanko is to sue Washington State over its Best Available Protection regulations on the grounds that they override federal law. The case, which will probably end up at the US Supreme Court, is also being taken up on the grounds that Intertanko members will 'suffer immediate and irreparable harm' if the regulations are enacted.

Tullow Oil has been informed by the Pakistani government that gas production from its discoveries in Block B and Kandhkot East has been allocated for use in a private power generation project. The 470MW power station will be completed in April 1996.

Venezuela cracks down on pollution

Increasingly stiff penalties will be meeted out to international oil companies operating in Venezuela which fail to comply with environmental law to the letter.

In a new report, Petroconsultants warns that pollution is becoming an extremely sensitive issue in Venezuela. 'The country has a long tradition of environmental problems related to the oil and gas industry,' say the authors. 'Already there have been a number of convictions under the law involving state-owned companies.'

The Penal Environmental Law, which was enacted in 1991, has yet to kick into action. When it does, companies can expect 'draconian penalties' for breaches of permits and environmental law, especially since the policing of pollution is now in the hands of the criminal courts.

'This new law signals a greater interventionist attitude on the part of the authorities,' according to the report. 'Despite problems for enforcement, one cannot assume that the familiar pattern of disrespect of environmental law will continue.'

One future problem for oil and gas companies is Venezuela's system of protection for natural areas, which covers more than 50 percent of the country. As exploration moves into increasingly remote and virgin locations, the chances of breaching this legislation is likely to increase dramatically.

With estimated conventional oil and gas reserves of 30 billion barrels and 118 trillion cubic feet respectively, Venezuela exerts a powerful attraction amongst exploration and production companies. However, almost every large company in Venezuela is now setting up its own internal environmental committee to heighten awareness among colleagues and avoid the criminal courts, which have the power to close operations down on temporary or even permanent basis.

OSO focuses in on 'top ten'

The Scottish-based Oil and Gas Projects and Supplies Office (OSO) is to concentrate its attentions on just 10 countries, in a determined attempt to help UK suppliers win a larger share of the world market.

Azerbaijan, India, Brazil, Colombia, Qatar, Indonesia, Kazakhstan, Vietnam, Pakistan, and Saudi Arabia have been singled out as priority markets which could yield a staggering $75 billion for UK firms over the next five years.

But OSO has also warned that British firms must adapt to the requirements of the country they are dealing with. 'All too often we hear that bids have failed because they were gold-plated.'

New terminal facilities at Grangemouth

Last month a new terminal was opened by Kuwait Petroleum (GB) at its Ross Chemical and Storage facility at Grangemouth.

Representing an investment of £5.7 million, the products terminal was officially opened by local MP Michael Connarty, who praised the commitment of the company in making a significant contribution to the infrastructure of the Scottish economy.

The new facilities involve the modernisation and extension of the existing terminal, originally built in the 1960s. Normal operations continued while construction of the spacious new facilities took place on reclaimed land. Throughput capacity has now been considerably extended – to an estimated 900,000 tonnes per year – with product flow rates increased by 88 percent. Liquid storage capacity now totals 95,000 cubic metres of which 70 percent is dedicated to hydrocarbons and the remainder to chemicals, sodas and acids.

Features to meet present and, it is hoped, future health and safety standards such as bottom loading gantries, vapour capture systems and driver controlled electronic metering, have now been installed. Safety measures include integrated vehicle earthing and overspill prevention equipment. The installation of a vapour recovery unit will follow next year as a second phase of the current expansion.

Kuwait Petroleum (GB) Managing Director Owen Jenkins said that central Scotland was one of the key marketing areas for his company and that these new terminal facilities would make possible an expansion of its Scottish operations when the opportunity arose. The company was making itself ready to take advantage of the 'booming' Scottish economy.

Kuwait Petroleum invests £5.7 million in new Scottish terminal

Kuwait Petroleum (GB) is just one of the terminal's customers but Ross Chemical and Storage also provides terminal services for other companies such as Conoco, Gulf, ICI Chemicals, Occidental Chemicals, Phillips and Total.

Mr Jenkins explained that Kuwait Petroleum was 'a relatively small player' in the UK market, though it plans to become somewhat bigger. He pointed out that, apart from the terminal, his company had invested £3 million in Scotland in the last 12 months.

In Europe the Kuwaiti presence is bigger. According to Mr Jenkins, the parent company, Kuwait Petroleum International, has large market shares of up to 20 percent in Sweden, Denmark and Benelux, a very significant presence in Italy and new companies in Spain, France, Germany and Hungary. He added, 'KPI remains one of the fastest growing petroleum organisations worldwide, with vigorous forward plans.'

Competition in the UK gas market 'will go ahead as planned'

Industry panic over the government's decision to delay the final parliamentary stages of the Gas Bill has now largely subsided, with some independent gas suppliers actually welcoming the hold-up.

'I believe it's a good idea,' said Kinetica's Commercial Director John Astrop. 'The legislation has moved at a tremendous rate and involves a lot of fairly complicated material. We can use this summer break to iron out all the wrinkles and debug the paperwork.'

Delaying Royal Assent until the autumn, he added, would also allow a breathing-space for those working on the draft licences, which still required a great deal of attention.

The general consensus is that the delay was the result of an overly busy parliamentary timetable, rather than any lack of commitment on the government's part. However, some independents are still concerned that the April 1996 start-up date could be in jeopardy.

'We are disappointed because an awful lot of effort is now required if we are to meet the original deadline,' admitted Managing Director of Amerada Hess Gas, Caroline Harper. 'However, we have now been assured that there will be no further slippage.'

These assurances have come from both the Department of Trade and Industry and the Treasury, which have been at pains to calm fears on all sides.

'We're now very confident that the timetable will progress as planned,' said an Ofgas spokesman. Initial fears that the delay would postpone the setting-up of a licensing centre to a dangerously late stage had largely been allayed, he said.

In theory, the Treasury will not relinquish the £1 million needed to set up the centre until the Gas Bill is passed. However, Ofgas has been told that 'The government will work on some way of sorting the funding problem out'.

However, concerns still remain over the effects the delay could have on the already-troublesome Network Code, which defines the rights and responsibilities of all participants in the gas transportation industry.

The Code, which has already slipped back from its original deadline of October 1995 to a more phased approach, is reliant on certain licence conditions.

Old transportation contracts, which operate on monthly balancing, have to be altered to fit in with the new daily balancing regime. As one industry source pointed out, 'We can't have two classes of suppliers operating under the same system.'

According to one independent, some potential competitors have been much harder hit by the delay than others. 'Certain firms have spent more money than is wise,' he told *Petroleum Review*. 'Personally, I believe its rather foolhardy to commit money until details of the legislation and licences have been ironed out.'

Ofgas chief Clare Spottiswoode: confident of meeting deadline

Kinetica's John Astrop: 'The delay is a good idea'

OPA90 fails to curb veteran tankers

The Oil Pollution Act of 1990 (OPA90) has yet to deter ageing tankers from trading in US waters, according to a new study by Lloyd's Maritime Information Services (LMIS).

In the five years since the legislation was enacted, the number of vessels of more than 20 years has actually increased. Whereas in 1990 they accounted for less than five percent of the total cargo carried in US waters, last year their share rose to above 10 percent.

This alarming trend reflects the tanker building boom of the early 1970s, and the corresponding dearth of activity in the latter part of that decade. The veterans are therefore making up for a shortfall in the number of 'middle-aged' tankers built between 10 and 20 years ago.

However, according to LMIS, these ageing tankers are experiencing no more than a stay of execution. 'The OPA90 provisions have yet to bite,' warns the study.

From now on, life will get increasingly tough for old tankers. For example, the maximum age for single hull tankers currently stands at 28 years, but will reduce annually by one year from 1995 until the year 2000, when the maximum age will be 23 years. Moreover, by the year 2010, no single hull tankers greater than 30,000 dwt will be allowed to trade in US waters.

'The overall message', concludes the report, 'is that the regulatory net is tightening around tankers trading in US waters'. Already the Act has witnessed a sharp increase in the percentage of younger tonnage. Five years ago, less than 12 percent of US oil imports were carried in vessels of five years and under. By 1994, that share had risen to almost a third.

Another trend highlighted by the study – which analyses figures from the group's Analysis of Petroleum Export (APEX) service – is a move away from long-haul imports from the Middle East. Imports from countries close at hand, such as Mexico, now account for over 25 percent of oil imports, compared to 15 percent five years ago. 'Following the Iraqi/Kuwait conflict, sources of oil closer to home have become strategically and economically more desirable for the United States,' says the report.

British Gas in talks with BT

British Gas is in negotiations with British Telecom over a trial that would allow gas companies to read meters using phone lines.

Up to 1,500 industrial and commercial customers could be part of the remote metering trial, according to a British Gas spokesman. Information on consumption would be transmitted from their dataloggers into Transco's central computers.

If the trial was a success, the BT network of 27 million lines could eventually be used to read the meters of Britain's 18 million domestic customers.

However, British Gas has stressed that negotiations are still at a very early stage. 'We've not committed ourselves to anything at all as yet,' said a spokesman.

Tanker owners urged to 'stand up for themselves'

Tanker owners must stop kowtowing to the oil companies and take radical action if they are to survive in the marketplace, according to a new report.

The outspoken report, from Marine Navigation, the London branch of the World-Wide group, urges owners to move rapidly towards an open market and to pool their larger tankers.

'It is amazing how often an owner, when asked why he did not try for a better rate, replies that he didn't want to upset the charterer for fear of blacklisting,' said the Chairman of Marine Navigation, Mr Philip Owen. 'They must stand up for themselves at last and make themselves heard.'

In a recent presentation, Marine Navigation said that scrapping 'surplus' tonnage was not the answer to the industry's problems.

'Other industries manage perfectly well on a surplus of 10 percent,' said Mr Owen, former Commercial Director at Shell International Shipping. 'Yet we're flat on it and bleeding to death.'

The report recommends that shipowners turn their attention towards creating a transparent market instead, which would give them a clearer idea of the level of activity.

'At the moment the spot market is permanently opaque, with owners operating on a "grace and favour" basis and over-competing for trade,' said Mr Owen. 'They should stop worrying about upsetting the charterers because they may have many other potential customers that they simply don't know about.'

The report also accuses the shipowners of lacking basic commercial expertise and urges them to improve their calibre of staff. 'They do not seem able to think and act strategically to solve the problems of the industry,' said Mr Owen. 'It is amazing how often staff just don't realise why the oil companies adopt certain tactics.'

But the report's most dramatic recommendation concerns those owners with only a few VLCCs. 'They should hand over the commercial management of these vessels to a larger owner, perhaps in the form of a pooling arrangement,' said Mr Owen.

Owners of the 14 or so ULCCs left in the world should also merge into one commercial unit, according to the report.

Marine Navigation admits that the pooling of resources is still a long way off, but is confident that owners are beginning to see the need for a more open market. 'This should mean that at long last we will see freight rates going up,' said Mr Owen.

French companies invest in biofuel production

French groups are behind three separate projects to produce biofuel from agricultural products.

Total, in association with the country's beet growing industry, is to invest FFr150m, in an ETBE biofuel production unit on the site of its refinery complex at Gonfreville in Normandy.

The unit, scheduled to be operational by the end of 1996, will consume 300,000 hectolitres of ethanol in producing around 50,000 tonnes a year of ETBE.

In another project, a 150,000 tonnes a year capacity plant producing Diester, a biofuel made from rape seed, has opened at Rouen. Sofiproteol, a financial holding company representing France's oil seed producers, has invested FFr155 million in the plant.

Meanwhile, French food processing group, Eridania Beghin-Say, via its subsidiary, Novaol, is to build a 50,000 tonne per year capacity biodiesel production plant at Magdeburg, in former East Germany. Around FFr88 million is being invested in the plant which is scheduled to enter service late in 1996.

One of Germany's biggest co-operatives, RHG, is to supply the plant with feedstock and will also retail the biodiesel at its network of service stations.

OILC merger with mine workers 'on track'

OILC leader Ronnie McDonald has said he is 'fairly confident' that a merger will take place between the National Union of Miners (NUM) and his own union within the next six months or so.

A merger would give the OILC (Offshore Industries Liason Committee), which currently has a membership of around 1,800, far more financial clout, according to Mr McDonald. 'The NUM has around 12,000 members and is still extraordinarily well-resourced.'

The merger makes sense, he said, because both unions are operating in the energy sector and are industry-specific.

Several more hurdles will have to be cleared, however, before the unions can unite. In particular, the NUM must seek the blessing of the TUC and all those individual affiliates affected by the move. The AEEU engineering union has been particularly vociferous in its opposition to the merger and several unions dislike the OILC, which they accuse of stealing membership from recognised unions.

Some OILC members are also opposed to the merger on the grounds that it brings the union back towards the folds of the TUC.

Britannia gas to use Mobil terminal

Chevron and Conoco have opted to process Britannia gas at Mobil's St Fergus terminal, rather than build a new, dedicated structure.

The Scottish Area Gas Evacuation (SAGE) terminal will be expanded to accommodate the extra gas, creating around 250 construction jobs. The terminal already handles gas produced from the Beryl, Brae and Scott fields.

One of the additions included in the £70 million expansion will be a by-pass train which will add more than 740 million standard cubic feet of gas per day (mscf/d) to the current 1,150 mscf/d capacity of the terminal's two existing process trains.

'The use of SAGE provides the best economic route for transporting Britannia gas to shore,' said Project Director Jeff Tetlow.

Construction is expected to begin in 1996 and will take approximately two years. Britannia gas will be delivered to the terminal via a new pipeline, which is due for installation next year.

Coalbed methane given green light

Britain's beleaguered coalbed methane (CBM) explorers have been given a boost at long last, with the launch of the UK's seventh onshore licensing round.

This is the first onshore round to take place since privatisation of British Coal, which never made life easy for the CBM industry. Now coal ownership lies in the hands of the Coal Authority which has a clear duty to encourage the exploitation of CBM.

Announcing the round, Junior Energy Minister Richard Page said, 'I am very keen that the potential of this new source of energy should be realised.'

Fuelling the front line - 1944!

By Lt Col 'Curly' Cail, Executive Secretary, The Independent Tank Storage Association

Reading 'Fuelling the front line' in the June issue of Petroleum Review and having, over the VE-Day 50th anniversary celebrations, opened up some long-put-away war-time papers, it struck me that there might be some interest within our industry in how the forward supply of vehicle fuels (POL in army terminology) to the forces was achieved in one theatre of war at that time.

At the outbreak of war resupply of POL in the field was restricted to movement in cans and 44-gallon drums, or tanker, by road, with limited filling into containers in forward support areas. The cans were mainly 4-gallon 'flimsies' made of light tin-plate, with crimped joints, an interleaved composition seal and soldered seams. Filled two in a cardboard box, millions of these were shipped to theatres of war overseas. There were serious losses by leakage but they fulfilled their role, and to the soldier in the field they were a life-saver. Once empty they could be cut up with light shears, or even an army tin-opener, and used for dozens of different jobs, from washing bowls to construction materials. Filled with sand and in quantity, they made cookhouses, offices and field ovens. As a comfort aid in the field they were indispensable. Half a flimsy half-filled with sand and impregnated with gasoline was the squaddy's essential equipment for a life-saving brew-up.

Jerrican copied

Everyone knows the Jerrican. Nowadays, constructed in plastic, it is still sold in quantity as an essential part of caravanning and camping equipment. But not many people know that it came into the UK forces via the 8th Army in the Western Desert, where it was captured from the Afrika Korps and sent back to the United Kingdom as 'Just what the army needs most'. For once no one tried to improve it and it was manufactured here to the exact design of the German or 'jerry' can and became a major factor in improving the forward refuelling of vehicles in the field.

The Americans tried to improve on it but theirs, dubbed the Ameri-can, was a near disaster – it had a lapped seam around the base with a synthetic rubber seal and if it fell on its edge, it invariably started to leak. To repair it, after de-gassing, the whole seam had to be welded. The Jerrican also leaked but, again after de-gassing, it could be spot-welded at the leak and then returned to service.

Italian Campaign

Resupply problems in Italy along the Lines of Communication (LofC), over some of the most difficult terrain in any theatre of war required that, wherever possible, POL should be moved by ship to military forces at small coastal ports for onward transportation by road in road tankers, cans or drums.

The problem had been foreseen and oil industry trained specialists drafted in to the forces were called upon to carry out this role.

Once the systems had been brought into operation, General Herbert Whitty, responsible for transport and supplies at Allied Force HQ in the Palace of Casserta, near Naples, realised that there were no regular officers who knew about these special techniques.

It was thus that, as a very young Sandhurst-trained captain, I found myself with a number of contemporaries on an eight-week Long Petroleum Course (long for wartime), which took me around requisitioned and improvised petroleum installations from Taranto at the heel of Italy, via Naples and Rome, to Monopoli, Bari, Ortona and Ancona on the Adriatic coast, calling at Siena, Perugia and Assisi on the way.

Operations at Ancona

My first POL assignment, from mid-November 1944 to the end of the war in Europe, was at the Ancona advanced base, set up to support the 8th Army to the north.

In early July 1944, whilst the base troops were forming up outside Naples, Ancona was still in enemy hands. During the next two weeks they moved to an area some 100 kilometres to the south and, on 19 July, the news came that Ancona had, at last, fallen to the Allies.

On the following day, HQ RASC 14 Petroleum Installations (14 PI) moved forward and set up its headquarters on the coast road between Ancona and Falconara, site of an Italian refinery which had been pre-selected as the base for the army POL facilities. With the shallow Adriatic beaches, a long causeway to deep water had been built for discharging and loading tankers. The retreating enemy had done what it could to damage the shore facilities but these could be repaired. However, the Royal Engineers indicated that the wide breach which had been blown in the causeway was irreparable in the short term, so it was decided to discharge tankers at Ancona port jetties and pipe product through transportable (victaulic) pipelines over the 20 km to the installation. So much damage had been inflicted on the rail track paralleling the road and coast that it was unusable. This provided an ideal pipe track and the unused Ancona railway station became the pump station for boosting the ship-pumped product to the refinery.

Because mines laid in the harbour delayed the arrival of the first tanker, discharge did not commence until mid-August. However, in the interim, work pressed ahead to clean available tanks at the nearby API installation. The portable pipeline was laid and the pump station built; packed POL delivered by sea was

being put down at what was to become a major reserve packed POL depot, resupply facilities for high octane gasoline were arranged for RN air-sea rescue craft, whilst, on the down side, two craft bringing packed POL up the coast were lost by enemy action.

In the next three months before I arrived, prodigious engineering works were completed with the minimum of equipment and material, sites were cleared, civil labour was recruited to clean, fill and handle the containers, and the task of supplying the forward units moved up to top gear. During this time the Commander in Chief Allied Armies in Italy, General Sir Harold (later Field Marshal Lord) Alexander, visited the installations to see for himself the work that was going on – a great boost to morale. By that time aviation fuels were being received in bulk for supply to US airfields set up in the area and to the RN Coastal Forces Mobile Base in Ancona harbour.

Italian help

Once the Italian government had capitulated, there were numbers of standing Italian units which were available to supplement manpower needs as the LofC lengthened. These were swiftly called into service.

Specialist units such as sappers helped to repair or replace blown bridges along the main routes, while signal units laid and repaired telephone lines.

The teeth arms were formed into labour battalions under Pioneer Corps supervision for work in support areas, to release Allied personnel for duties in the combat zone. Such units were divided between the US and British forces and collected the generic titles of US-Ities and Brite-Eyes! 14 PI had their Brite-Eyes to supplement the locally-recruited civilian labour.

Most of them were young girls transported down from the hill towns around Ancona in the early morning and taken back in the evening. They were tough peasant girls, used to heavy work; they handled the drums and cans with energy and ease, while their forbearance and good-humour under often appalling conditions was outstanding.

The male labour were less amenable and energetic, requiring much more supervision. Working in can- and drum-filling areas or stacking filled containers, careful checks were essential to ensure that matches and lighters were handed in before entering the hazardous areas. Story has it that one man smuggled in his lighter to fill it, which he did successfully. But he could not resist the temptation to test it, resulting in serious burns to himself and a conflagration at the temporary can-filling point, with a frustrating delay in the container filling programme whilst the facility was rebuilt. Incidentally the installation fire brigade was Italian-manned with Allied supervision, with close liaison with the local *pompieri*.

Eventful advance

The API installation was in Ancona town, half way up a hillside, and the only product access from the harbour facilities was via a pipeline up the hill. During a night-discharge of motor gasoline from a ship, the line was damaged by a wall collapse, and product found its way to the town sewers, which discharged into the Adriatic Sea. Whilst the product was being flushed from the sewers a series of explosions occurred and man-hole covers were thrown into the air all round the town, sadly with the loss of life of one of the gallant Italian *pompieri* fighting the sewer fires.

As the battle moved forward and the LofC stretched out, resupply to the forward units by road-vehicle became critical. It was therefore decided to use American-supplied victaulic pipelines, pumping sets and transportable 10,000 barrel bolted tanks to construct a pipeline to the north and connect, initially, to a small Italian facility near the town of Ravenna.

The rule book said that it was the Royal Engineers' job to construct and operate portable pipeline systems but, before they had gone very far, the Engineers ran out of manpower and could not continue to do both tasks.

So it was that the operation of the lines, intervening pumping stations and intermediate terminals was handed over to my corps, the Royal Army Service Corps, which has continued to fulfil this role ever since. Eventually this victaulic line stretched some 340 km to Mestre at the base of the Venice Causeway, and on the way utilised a subterranean Italian methane gas line to cross the River Po.

VE Day

The Armistice in Italy came just before that signed at Luneburg Heath in Germany but we celebrated VE Day in Ancona on the same day as the other victorious Allies in Europe. We had a celebratory lunch, but a very quiet evening, until the Navy and all the merchant ships in Ancona harbour opened up with all their anti-aircraft weapons, star-shells, Verey lights, all in a celebratory cannonade skyward! It was very impressive to watch but, with thousands of tons of high octane gasolines in tanks and containers well in range, we were relieved when the barrage died down!

The new contaminated land power: the implications for petrol retailers

By Ian Doolittle, Partner, Trowers & Hamlins

Readers will not need to be reminded of the industry's concerns about potential clean-up liability for petrol retail sites. There have been a number of individual and industry-wide reviews of the way in which petrol retail sites are owned and operated. Everyone is conscious that there are difficult times ahead as people become more litigious and the regulators more rigorous. There is every reason therefore for the petrol retailers to take a close interest in the new contaminated land power which is about to be enacted.

Background

Readers may recall the contaminated land register saga. At a late stage in the passage of the Environmental Protection Act 1990 the government unwisely introduced what became Section 143. This made provision for the introduction of registers of land subject to contaminative uses. It proved to be a hasty and ill-considered commitment. Faced with fierce pressure from the property industry, the government backed down. It looked afresh at the entire issue of contaminated land and, following a lengthy consultation process, bought forward a new contaminated land power. This has found its way into the current Environment Bill [which, having completed its passage through Parliament, has just become the Environment Act 1995 – *Ed*]. This article is based on the print of the Bill dated 15 June.

The Environment Act 1995 has as its main feature the establishment of the Environment Agency (in England and Wales) and the Scottish Environment Protection Agency. The opportunity, however, has been taken to introduce a number of other environmental provisions, including a comprehensive set of provisions relating to contaminated land. These will form a new Part IIA of the Environmental Protection Act 1990. The provisions deal for the first time expressly with contaminated land. It is hard to over-state their importance.

The regulators

It is ironic that an Act which establishes national agencies for environmental control leaves the primary responsibility for contaminated land with local authorities. The cynic would say that contaminated land is regarded by the government as a 'hot potato' which is best placed in the lap of local authorities. It must be very doubtful whether local authorities will have the resources and expertise to deal effectively with their new responsibilities and, though they will obviously welcome the control over the local environment, local authorities are unlikely to be able or perhaps to be willing to rise to the challenge. On the other hand, local authorities will come under severe pressure from local inhabitants and the result, at least in the early stages, could be unpredictable. The fact that local authorities are given primary responsibility may explain why the government has adopted the model of the existing statutory nuisance provisions (in Part III of the 1990 Act) as the basis for these new provisions.

Contaminated land and special sites

Sites will be divided into two categories. There will be contaminated land pure and simple and so-called special sites.

Contaminated land, for the purposes of these new provisions, is land where significant harm is being caused (or there is a significant possibility of such harm being caused) or water pollution is being, or is likely to be, caused.

Special sites are sites where serious harm would or might be caused or serious water pollution would be or would be likely to be caused. There will be guidance and regulations to 'flesh out' these basic provisions. The importance of the distinction between contaminated land and special sites is that the former is the responsibility of the local authorities and the latter of the Environment Agency.

Identification

It is the local authorities' task to identify both contaminated land and special sites in their areas. Notice has to be given to interested parties, including the owner, the occupier and anyone who might be required to carry out remediation work. Some draft guidance on the way in which this identification process will work has been issued. The guidance certainly anticipates some prioritisation of sites but it certainly does not relieve the local authorities of their general duty to identify any contaminated land or special sites which fall within the new provisions. There is certainly a risk that practice will vary considerably from one area to another.

Remediation

Remediation is not simply to be equated to 'clean-up.' Remediation is defined so as to cover the entire spectrum of potential work, from assessment through clean-up to monitoring. Remediation can be required by service of remediation notices. Local authorities and the Environment Agencies must act reasonably. This means that they must have regard to both the cost which is likely to be involved and the seriousness of the harm or water pollution in question. Again there is government guidance. This will include the remediation standard which can be required.

'Appropriate person'

Remediation notices are served on the 'appropriate person.' In the first instance this will be the person who caused or knowingly permitted the contamination. This formulation has been adopted from other environmental legislation and there is already a good deal of case law on both 'cause' and 'knowingly permit.' The government has claimed that these new provisions apply the 'polluter pays principle', but acquiescence in the pollution may be sufficient.

There are three circumstances in which the owner or occupier is the appropriate 'person' and not the so-called polluter. The first is where the polluter cannot, after reasonable enquiry, be found. Whether this extends to insolvency is not yet clear. Secondly, there is the possibility of the transfer of liability to the owner or occupier. It seems unlikely that this will arise often in practice. The government seems to assume that when contaminated land changes hand a purchaser is ready, for a reduced price, to accept liability for the contaminanation. This does not accord with the writer's experience. The third circumstance is where the person in occupation fails to give consent. The government acknowledges the possibility that there may be more than one 'appropriate person' but merely promises guidance on the point. This is controversial and a number of observers have argued that such an important point needs to be set out clearly in legislation.

Liability for escapes

Liability for off-site contamination is the subject of special provisions. The basic rule is that a person who has caused or knowingly permitted any substances to be in, on or under any land shall also be deemed to have caused or knowingly permitted those substances to be in, on or under any other land to which they appear to have escaped.

There are some complex provisions designed, in essence, to protect the innocent land owner or occupier. The first case envisages a site ('land A') which has been contaminated from another site. The owner or occupier of land A who has not caused or knowingly permitted the contamination cannot be required to carry out remediation work in relation to any land or waters affected by offsite migration from land A unless the land or waters in question are owned or occupied by him.

The second case envisages that a further site ('land B') has been contaminated by off-site migration from land A. The owner or occupier of land A who has not caused or knowingly permitted the contamination of land A cannot be required to carry out remediation work in relation to land B unless he is also the owner or occupier of land B.

The third case envisages someone ('person B') who becomes the owner or occupier of a site which another person ('person A') has caused or knowingly permitted to be contaminated. If any offsite contamination occurs on other land, person B cannot be required to carry out work in relation to that other land in consequence of the acts or omissions of person A except to the extent that liability in respect of those acts or omissions has been transferred to person B or person B caused or knowingly permitted the escape.

Consultation

In the course of passage of the bill the government conceded that before a remediation notice can be served a three-month consultation period must elapse unless there is imminent danger of serious harm or serious pollution. Government also acknowledged that there may well be cases where a remediation notice is inappropriate or unnecessary. If, for example, the local authority or Environment Agency decided there was nothing by way of remediation that could be specified in the notice then it will publish a remediation declaration instead. If, on the other hand, a local authority or an Environment Agency decided (for example) that appropriate steps are being or will be taken by way of remediation without the need for a remediation notice then a remediation statement will be published.

Sanctions

Failure to comply with a remediation notice gives rise, in the case of industrial, trade or business premises, to a fine of £20,000 plus one tenth per day for any continuing default. There are rights of appeal. Both local authorities and the Environment Agencies have 'step-in' rights to carry out remediation work themselves. The reasonable cost incurred can be recovered from the 'appropriate person.' Regard must be had to any hardship which the recovery may cause. There are charging powers to enable local authorities and the Environment Agencies to recover their costs with interest.

Registers

Landowners have certainly not escaped registers entirely under these new provisions. Remediation notices, statements and declarations and a wide range of other notices and notifications are to be set out in registers maintained by the local authorities and Environment Agencies. There are conventional exclusion provisions relating to confidential information.

Conclusions

It will be clear that this new contaminated land power has significant implications for petrol retailers. They will wish to look carefully at both the legislative provisions themselves (once enacted) and also the accompanying regulations and guidance. The relationship (both legal and practical) between those who own and those who operate petrol retail sites will need to be considered with care to establish precisely who is likely to be the 'appropriate person' under the new provisions. Those who take charges over sites will also need to be vigilant. The definition of 'owner' contains an express exclusion for mortgagees not in possession; but this may not go far enough for some arrangements. There is also merit in a review of day-to-day procedures. Given the consultation and appeal procedures, early warning of potential remediation requirements will be essential. Whether, in the wider perspective, these new provisions really will be as pragmatic and 'balanced' as the government claims, remains to be seen. This writer's view is that, though the provisions themselves constitute a fair compromise between the demands of the environment and the legitimate interests of industry, their mere existence will raise the profile of contaminated land and make regulatory action more likely than under the current hotchpotch arrangements. Petrol retailers therefore should continue to press on with their attempts, at various levels, to mitigate their liabilities.

BULK STORAGE '95

Petroleum Review has once more updated its survey of independent bulk storage in Western Europe. We are very grateful to those companies which have supplied us with information and figures and answered our queries. If by any chance we failed to contact anyone in this business, they are asked to get in touch so that they can be included in next year's survey.

This year's survey reveals that rationalisation and restructuring are constant themes. However, while the recession took its toll, there is still the occasional opportunity for new facilities in new areas - what Paktank's Jan Brouwer refers to as 'niche market areas' such as Tallinn and rapidly emerging centres in the Far East.

It is also most marked that companies are installing increasingly sophisticated facilities – in some instances driven by the impending arrival of EC regulations.

Roger Hartless, Chairman, the Independent Tank Storage Assocation, said recently, 'We have to recognise that regulatory authorities have certain criteria we have to meet and our role is to meet them as effectively and efficiently as possible.'

Both his association and the Federation of European Tank Storage Association are active in putting the industry's views and comments to government bodies and the relevant international authorities in Brussels.

The Institute of Petroleum is also playing a part in these processes. IP Petroleum Measurement Paper No 7 is an example of how industry and government agencies can work together – in this instance to achieve recommended measurement practices for all tranfers out of bond (see Page 374).

TRENDS in BULK STORAGE

Petroleum Bulk Storage owned by independent companies in Western Europe

Country	Capacity (Cubic metres 1995)	% of Total
Belgium	1,656,000	4.60
Denmark	354,000	1.00
Eire	16,000	0.04
France	6,786,000	19.00
Germany	6,623,000	18.60
Italy	430,000	1.20
Malta	359,000	1.00
Netherlands	14,455,000	40.50
Portugal	87,000	0.23
Spain	230,000	0.63
Sweden	1,033,000	2.90
Switzerland	346,000	1.00
United Kingdom	3,320,000	9.30
Total	35,695,000	100.00

BULK STORAGE '95

Barrow Storage Co. LTD

Head Office: 15 Fitzwilliam Square, Dublin 2, Eire.
Tel: **(353) 1 6763524.** *Fax:* **(353) 1 6614704.**
Three installations: One at Marshmeadows, New Ross, Co. Wexford, Eire. Storage for 16,000 cubic metres of petroleum products, including LPG. The berth on the River Barrow provides for vessels up to eight metres draught. Tankage includes 4,500 cubic metres tank which is heated and insulated. One at Dundalk with 2,500 tons of gasoil and kerosene. A sea fed chemical storage plant in Tivoli, Cork with 2,000 tons of caustic liquor soda and plans for further chemical, oil and LPG extensions.

Bominflot Tanklager GmbH

Tankweg 1, 21129 Hamburg, Germany.
Tel: **(49) 40 740007 0.** *Fax:* **(49) 40 740007 32.**
Seventy-five tanks with a gauging volume of 240,000 cubic metres available for storage of mineral oils, chemicals, alcohols, vegetable oils, greases, paraffins, waxes and fertilizers. The A1 tank space is equipped with a Vapour Recovery Unit, security devices to prevent overfilling and is provided with double bottoms. The A111 tank space is equipped with heating coils, security devices to protect from overfilling, partly with double bottoms and in most cases it is insulated. The size of the tanks is between 50 and 25,000 cubic metres.

There are six berths with maximum tonnage at 80,000 dwt, maximum length is 260 meters and maximum draught is 9 metres. There is a discharging and charging station. For tank vehicles there are six platforms with volume metres, scales and four other discharging/charging stations.

BTP Storage LTD

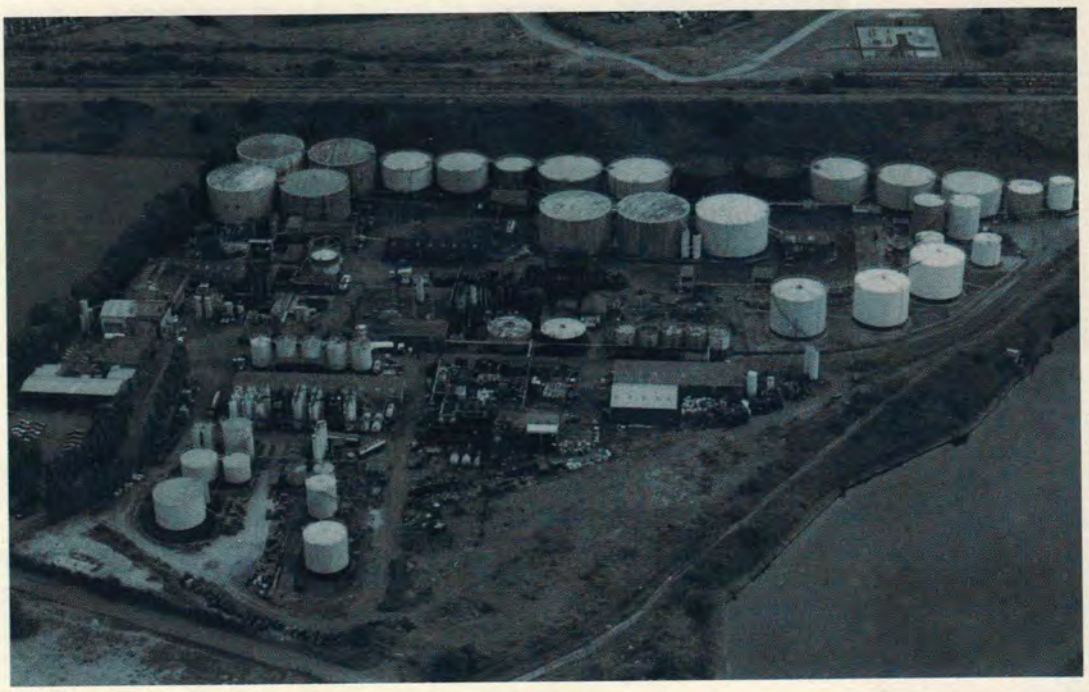
Hayes Road, Cadishead, Manchester M30 5BX, UK.
Tel: **(0161) 775 3945.** *Telex:* **669938.** *Fax:* **(0161) 775 3970.**
Part of the BTP plc group of companies. The installation occupies a 20 acre site on the north bank of the Manchester Ship Canal. Total tank capacity of over 100,000 cubic metres with a range of tanks up to 6,000 cubic metres capable of handling most types of petroleum and chemical products. Blending, drumming and weighbridge facilities available. Rail sidings for up to 1,400 tonnes. Berth: maximum draught 24.5ft approximately 6,000 tonnes. Easy access to the M6 and M62 motorways.

Chemical Manufacture & Refining LTD

Sunderland Tank Storage Division, Hendon Dock, Sunderland, Tyne & Wear, SR1 2ES, UK.
Tel: **(0191) 565 4018.** *Fax:* **(0191) 565 3648.**
The terminal can receive ships of up to 6,000 tons dwt capacity and has mild steel and stainless steel import lines. 36,000 cubic metres of storage are contained in 20 tanks. Products stored include petroleum refinery products, petrochemicals and chemical solvent by-products. Nearby associated company has large distillation units for processing of specification and contaminated cargoes. Drumming off facilities, drum storage and bonded facilities also available.

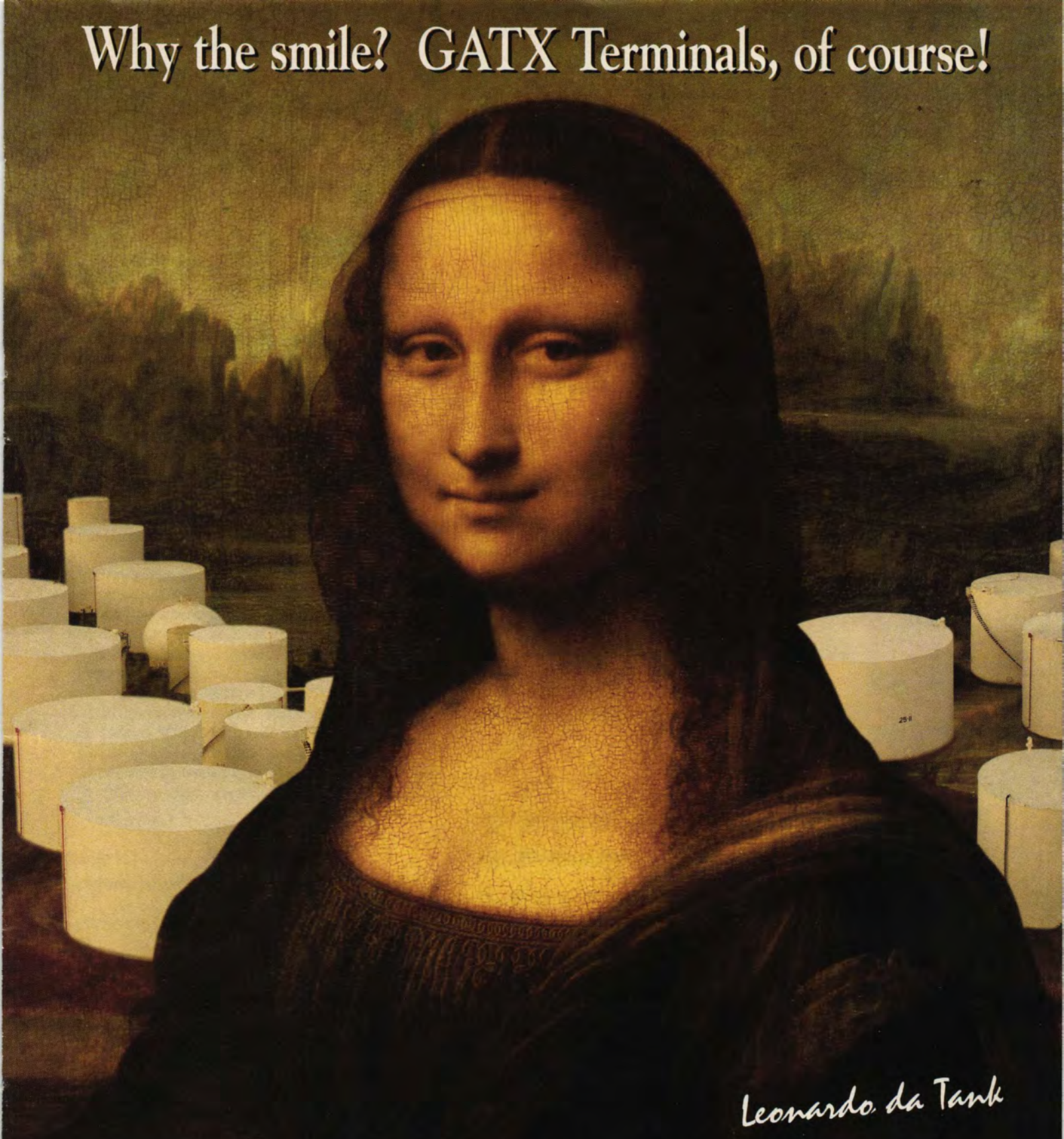
Compagnie Industrielle Maritime (CIM)

36, rue de Liege, 75008 Paris, France.
Tel: **(33) 1 43 87 33 49.** *Telex:* **280330 CIMDGPA.** *Fax:* **Paris (33) 1 43 87 43 08.**
Contacts: Mr B. Salaün (Sales Manager) Direct Line: (33) 1 43 87 43 14. Fax: Paris (33) 1 42 94 02 81.
Mr C. N. Malcolm (CIM Representative), Tel: (0171) 491 3911.
CIM is an independent French company which owns and operates a modern and highly sophisticated storage, transhipment and break-bulk facility capable of handling crude oils, distillates and all clean petroleum products. The complex, which is situated in France at Le Havre and Antifer, has a total capacity of some 5.2 million cubic metres. At



BTP Storage

Why the smile? GATX Terminals, of course!



Leonardo da Tank

Around the world, GATX customers are smiling because of the safe, efficient, reliable and cost effective way their bulk liquids are being handled and stored.

They're also smiling, because GATX has made bulk liquid storage into an art form with superior techniques in blending, mixing, testing, monitoring and transporting liquid commodities. As well as adhering to changing environmental regulations and meeting customer needs.

Keeping 800 million barrels flowing through 50 worldwide locations is an art in itself. All the other value-added services, just makes GATX a great master.

GATX

THE ARTISTS OF BULK LIQUID STORAGE

GATX TERMINALS CORPORATION

UNITED STATES 312-621-6200 • EUROPE 44-628-771242 • ASIA 65-660-9200

ALL INTERNATIONAL TERMINALS COMPLY WITH QUALITY ASSURANCE STANDARD ISO 9002

ILTA

Antifer, only crude oil tonnage in excess of 250,000 tons dwt is handled with the port being able to handle the world's largest tankers. At Le Havre, the smaller crude oil carriers (under 250,000 tons dwt), light distillates and all other clean petroleum products are handled.

There is a pipeline link allowing cargo to be transferred from Antifer to Le Havre (where it can be back-loaded after storage if required). All cargoes stored and handled are in a Customs Bond Warehouse and CIM prides itself on maintaining their clients' confidentiality.

CIM now owns all equipment at the Antifer Terminal, which consists of four tanks of 150,000 cubic metres each, and two of 22,500 cubic metres each with an overall capacity of 645,000 cubic metres. Access is by sea. Sea berths with draughts of 98ft and 82ft respectively. Facilities for discharging ULCC-type vessels up to 550,000 MT and for transhipments.

Comos Tank BV

Octaanweg 14, 1041 AN Amsterdam, The Netherlands.
Tel: **(31) 20 587 2121.** *Telex:* **13121.** *Fax:* **(31) 20 587 2150.**

A subsidiary of VTG Vereinigte Tanklager und Transportmittel GmbH. Operates a terminal with an overall capacity of 700,000 cubic metres for storing all petroleum products and bulk chemicals. Tanks range from 3,500 to 40,000 cubic metres, some coated or insulated and equipped with heating-coils. Blending facilities for gasoline, heavy fuel oil and gas oil and facilities for leading, product washing and butanising are available. Three jetties for seagoing vessels and eight jetties for barges. Distillation towers for processing are available to ensure efficient storage and transfer.

Decal SPA

Port Marghera (Venice), Italy.
Terminal Manager: Ing. De Belli *Malcontenta Fusina, Venice, Italy.*
Tel: **(39) 41 547 107.** *Fax:* (**39) 41 698 175.** *Telex:* **410556 decal i, 3122.**

Seventy seven tanks with a total capacity of 250,000 cubic metres for chemicals and petroleum products. Chemical storage 150-6,000 cubic metres each. Petroleum product 2,000-15,000 cubic metres each. Services include: Vessel loading/unloading, barge loading/unloading, product heating, product cooling, product blending, nitrogen blanketing, railway-siding: up to 2 block trains per day, 2 berths: maximum draught: 31 feet.

Depots Petroliers de Fos SA

Z.1 Secteur 81-Audience 818, 13270 Fos-sur-mer, France.
Tel: **(33) 42 47 65 00.** *Telex:* **430235.** *Fax:* **(33) 42 05 62 08.**

DPF, a company in which Van Ommeren Tank Terminals has a share, has one installation in France, at Fos-sur-Mer. The terminal has 780,000 cubic metres in 40 tanks. 80,000 cubic metres dedicated to dirty products in tank ranging from 5,000 to 10,000 cubic metres. Most of them are insulated and equipped with propellers. Tank connections enable any kind of blending. 700,000 cubic metres dedicated to clean products, mostly gas oil, gasoline, jet fuel and MTBE. Facilities offered by DPF make it the most interesting terminal in West-Med to achieve any kind of blending from lead, butane or MTBE injections in the gasolines range to changing cold properties, sulphur content, flash point in the middle distillates range. Seagoing vessels (3 berths up to 71 feet), coasters (1 berth up to 21 feet) and barges (1 berth up to 10 feet) can be handled in all products. Pipeline connections enable cargo to be transferred from any local refinery to DPF and from there to the Rhône valley and to Switzerland. DPF is handling about 250 trucks and one block-train per day.

Dupeg

Terminal: Tankweg 4, D-21129 Hamburg, Germany.
Tel: **(+49 40) 740 440.** *Telex:* **0217656.** *Fax:* **(+49 40) 740 1703.**

Dupeg Tank-Terminal in the Port of Hamburg specialises in handling liquid cargoes. The handling facilities at Waltershof Petroleumhafen are some of the most modern in Europe.

On average, some 150 different liquid cargoes are stored each year in more than 100 tanks which can take virtually any kind of cargo, eg petrochemicals, chemicals, turpentine products, industrial alcohol, alcoholic beverages, acids, alkalis, vegetable and animal oils and fats.

One third of the total tank capacity of 130,000 cubic metres is fitted out with special linings and the qualitative treatment of products, eg mixing, filtering, clarifying or standardising, is part of the service Dupeg Tank-Terminal offers.

Individual tanks of 20 to 10,000 cubic metres, including 26 stainless-steel tanks totalling 17,500 cubic metres.

Dupeg's management system is accredited with the DIN ISO 9002 quality control standards. In accordance with the terms of the International Marine Pollution Convention MARPOL, Dupeg Tank-Terminal serves as the recipient for chemical slops from ships calling in at the Port of Hamburg.

Transport links include: two pontoon bridges for ocean-going ships of up to 35,000 DWT (depth of water: 13 metres). Container ramps and lighter berths for handling barrelled cargoes. Own sidings complete with tank wagon filling station. Linked to European motorway system via neighbouring A7 Autobahn.

Eurogas Terminals CV

Head Office/Terminal: PO Box 410 4380 AK Vlissingen, The Netherlands.
Tel: **(0031) 1136 12820.** *Telex:* **55684.** *Fax:* **(0031) 1136 13444.**

The terminal has 130,000 cubic metres capacity for storage of LPG and chemical gases, six spheres of 3,369 cubic metres each, and two refrigerated tanks of 55,500 cubic metres each. There are three jetties for sea-going vessels and barges (draught up to 52ft). Board/board operations for a wide range of gases for vessels/barges are possible.

Furthermore, there are facilities for the purging of vessels/barges/trucks/trains with nitrogen including flaring off. There is an open connection to the sea via the Westerschelde and there are good connections to the interland by rail, road and water.

A 10 inch piggable pipeline can easily be connected to the existing ethylene and/or propylene grid system in the ARA-area and beyond.

Practical and theoretical training for third parties in the LPG industry and the consultancy for design/operations/start-up for LPG storage plants continued in 1994.

Felixstowe Tank Developments

FTD House, The Dock, Felixstowe, Suffolk, IP11 8SE UK.
Tel: **(01394) 676112.** *Telex:* **98341.** *Fax:* **(01394) 673590.**

Solid in liquids.

Our facilities are as steady as a rock. We're solid in liquids. It means we are a partner you can rely on. We meet your requirements in the storage and handling of petroleum products, chemicals, molasses and edible oils and fats. But there's more. Solid in liquids also reflects our drive to achieve higher standards in our service to you. Some are clearly visible. Others hide from sight. You won't be surprised to hear that we are annually investing a great deal of time and money in safety and environmental measures.

Solid in liquids also implies being where you expect us to be. With a total terminal capacity of over 10 million cbm in Europe, North America, Mexico and Asia, we provide a global network with a local touch.

In short, solid in liquids means you can rely on us.

Van Ommeren Tank Terminals, Westerlaan 10, 3016 CK Rotterdam, The Netherlands.
Telephone +31 10 4642346. Telefax +31 10 4642819. Telex 21435 vo nl.

Van Ommeren
Tank Terminals

One hundred tanks, mild and stainless steel, totalling 65,000 cubic metres storage capacity equipped to handle a comprehensive range of liquid, edible, chemical and petroleum products. Alcohol, hydrocarbon and IDA bonds available.

FETSA

Federation of European Tank Storage Associations, *Av. F. van Nieuwenhuyse 4, Bte 8, B-1160 Brussels, Belgium.* Postal Address: *c/o VOTOB PO Box 443 2260 AK Leidschendam, NL. Tel:* **3170 337 8750.** *Fax:* **3170 320 3903.**
FETSA embraces national associations of independent tank storage operators in seven EU member states, representing a total of 70 companies – with affiliates – owning 168 terminals with a total volume of about 36 million cubic metres of storage capacity.

FETSA is active in the interface with international government institutions and other federations with relevant adjacent interests.

Fox Petroli SPA

Via Senigallia N. 29, 61100 Pesaro, Italy.
Tel: **(39) 721 403465.** *Fax:* **(39) 721 403505.**
Total storage capacity of about 130,000 cubic metres of oil products (clean and dirty). Terminal in Pesaro Harbour for loading and discharging vessels. Services available: Tank-Truck loading/unloading, heated and insulated tanks and pipes, tanks equipped with recirculating systems, petroleum products dyeing, blending of oils and fuels, heat supply, tank-truck weighing, bunkering of barges with tank-trucks and custom services.

Gamatex N.V.

Head Office: Haven 623, Scheldelaan 450, B-2040 Antwerpen, Belgium.
Tel: **(3) 561 15 00.** *Telex:* **32459.** *Fax:* **(3) 561 15 27.**
Gamatex is a 50/50 joint venture between GATX Terminals Corporation and Van Ommeren Tank Terminals and has one installation in Belgium.

Antwerp: The terminal offers 143 tanks with a total capacity of 486,100 cubic metres for mineral oils, petrochemical liquids and chemical gases. There are five jetties for seagoing vessels (draught 44ft) and five for barges. Access is by sea, rail and road and pipeline. Tankage is insulated, coiled, coated, mild steel as well as stainless steel. Heating possibilities are steam, warm-water and electrical tracing. Tanks for chemical products are equipped with dedicated productlines and pump and most of them with vapour return. Pre-pump, blending, drum filling and nitrogen blanketing are also available .

GATX Terminals LTD.

Nicholson House, High Street, Maidenhead, Berks SL6 1LQ, UK.
Tel: **(01628) 771242.** *Fax:* **(01628) 771678.**
A wholly owned subsidiary of GATX Terminals Corporation of Chicago. GATX Terminals Limited operates eight terminals in the United Kingdom. Subsidiary: Manchester Jetline Limited. Associates: Tees Storage Company Limited; Unipen Limited; Wymondham Oil Storage Company Limited. GATX is BS 5750 part 2/ISO 9002 accredited.

Avonmouth, Bristol: Fifty-three tanks with a total capacity of 135,232 cubic metres, from 311 to 6,924 cubic metres in size, for high and low flash petroleum products, chemicals and oils and fats. Dock facilities comprise seven berths at the Royal Edward Dock (depth 9.8m, maximum length 210m, maximum beam 29m), five piggable docklines (three 10 inch lines, one 24 inch line and one 8 inch stainless steel line). Distribution is through fully automated top and bottom road loading facilities. Wensat pipeline connection. Easy access to M4 and M5 motorways.

Belfast: Thirty eight tanks with a total capacity of 50,116 cubic metres from 498 metres to 5,000 cubic metres in size for high and low flash petroleum products, chemicals. A new jetty capable of handling vessels with 18,000 tonne cargoes is now operational (overall length 150m, maximum beam 29m and depth 9.5m). There are two 8 inch stainless steel and one 6 inch mild dockline. All docklines are piggable. Distribution through fully automated top and bottom loading facilities. Easy access to M1 and M2.

Bromsgrove, Worcestershire: Nineteen tanks with a total capacity of 15,781 cubic metres in tanks ranging from 53 to 1,350 cubic metres for high flash petroleum products. This is a rail-fed terminal capable of handling 1,400 tonne block trains. Distribution through self service road loading facilities. Easy access to M40, M42, M5 and M6.

Eastham (Sites 1 and 2) Merseyside: Site 1: Seventy seven tanks with a total capacity of 267,136 cubic metres in tanks ranging from 35 to 10,800 cubic metres in size, suitable for high and low flash petroleum, lubricating oils and chemical products. Mild and stainless steel tankage, with and without coils and lagging. There are seven piggable docklines (two 6 inch stainless steel lines, one 10 inch stainless steel line, one 10 inch mild steel line, two 12 inch and one 14 inch).

Site 2: Eighty five tanks with a total capacity of 91,912 cubic metres in tanks ranging from 30 to 3,950 cubic metres in size, suitable for high and low flash petroleum, lubricating oils and chemical products. Mild and stainless steel tankage, with and without coils and lagging. There are 12 shipping lines on site (seven mild steel and five stainless steel, ranging from 6 to 10 inch). There is also a semi-automatic drum filling facility.

Dock facilities consist of three berths in the QEII Dock (depth 10.1 m, length 204m, beam 27.4 m) and one berth bank of the Manchester Ship Canal for high flash products. Both sites are capable of receiving and redelivering product by road. rail, barge and sea vessel. There is easy access to M53, M56, M6.

Grays, Essex: Fifty two tanks ranging in size from 1,700 to 20,800 cubic metres capacity and providing a total capacity of 310,749 for high and low flash petroleum products. There are two jetties (Wouldham Nos. 1 and 2, draught 11.3m, length 229m and unrestricted beam) with five piggable docklines (three 10 inch, one 12 inch and one 14 inch). Distribution through fully automated top and bottom road loading facilities. Easy access to M25.

Runcorn, Cheshire: Four tanks with a total capacity of 40,000 product tonnes for heated liquid sulphur. Dock facilities comprise one berth on the Manchester Ship Canal. Distribution is through road loading on two automatic weighbridges. Easy access to M53, M56 and M6.

Leith, Scotland: Thirty four tanks with a total capacity of 72,902 cubic metres in tankage ranging from 55 to 13,400 cubic metres capacity in size for both high and low flash petroleum products and chemical products. Dock facilities comprise one berth (max. length 198m, max. beam 30.5m, draught 9.5m). There are two new 10 inch mild steel petroleum docklines and two stainless steel docklines. Road loading is being upgraded to allow fully automated top and bottom

loading facility. Access to M8, M9 and M90.

Glasgow, Scotland: Whilst this site currently has only 5,000 cubic metres capacity for high flash petroleum products, further development to expand the terminal to 54,000 cubic metres capacity for high and low flash petroleum products is underway. This new fully automated terminal should be operational in early 1996.

Wymondham, Norfolk: Joint venture between Mobil Oil and GATX Terminals Limited. Eight tanks with a total capacity of 39,200 cubic metres ranging in size from 4,100 to 5,200 cubic metres. This terminal is pipeline fed and stores high and low flash petroleum products on a commingled basis. Distribution through fully automated road loading facilities. Easy access to A11.

Manchester Jetline Limited: Joint venture between GATX Terminals Limited and Penspen Engineering Consultants. The MJL pipeline system allows jet fuel to be transported to Manchester Airport. It started operating at the beginning of 1994. The system is such that most UK refineries could pump fuel to Manchester Airport if required.

General Tank Storage NV

Haven 275, Leon Bonnetweg 28, 2030 Antwerpen, Belgium.

Tel: **(32) 3 543 0505.** *Telex:* **31643.** *Fax:* **(32) 3 543 05 04.**

General Tank Storage NV (G.T.S.) a member of the LB Chimie group, is a BSI 9002 qualified company situated in the Port of Antwerps 4th Dock.

G.T.S. specialises in storing liquid chemical and mineral and vegetable oils either in bulk or in drums and IBCs. Its total tank capacity is 185,000 cubic metres. On a 30 acre sire with 1,854 ft of waterfront, 6,560 ft of rail and direct access to the motorway system, all forms of transport are catered for.

Together with on-site customs and control bodies, our own forwarding department provides quick and efficient completion of all formalities. Substantial investment in recent years, including the construction of a new, ultra-modern tank farm has enabled G.T.S. to take up a position at the forefront of the tank storage firms. With regard to safety and environment too, G.T.S. has acquired a leading position in the Port of Antwerp. Its efficient water purification plant includes high-tech treatment of Marpol I&II waters as well as water from inland navigation and from industry.

The central position of G.T.S. permits problem-free distribution throughout Europe by road, rail and water transport.

Haltermann GMBH

Head Office: Ferdinandstraße 55/57, 200 95 Hamburg, Germany.

Tel: **(40) 33318-0** *Telex:* **2161815** *Fax:* **(40) 33318-214**

Operates four terminals in Europe.

Hamburg-Wilhemsburg: Total capacity of 120,000 cubic metres, with tanks varying in size from 50 to 5,000 cubic metres, for all vegetable oils, petroleum products, solvents and chemicals. Some tanks are heating-coiled and insulated. Drumming and blending facilities are available. Access for ships, barges, road and rail tank cars and liner trains; two berths including a 33ft draught jetty.

Haltermann NV (Belgium): Ketenislaan 3 B-2748 Beveren/Kallo Linker Oever.

Tel: **(3) 7500211.** *Telex:* **33705.** *Fax:* **(3) 7750261.**

All petroleum products, solvents, chemicals and vegetable oils can be stored in this 60,000 cubic metre capacity terminal. Tanks vary in size from 300 to 3,000 cubic metres. Some are stainless steel and coated with heating coils and insulation. Drumming and blending facilities are available, as is an associated custom processing plant. Access by road, rail and sea for vessels up to 28ft draught.

Haltermann A/S (Denmark): Søndre Molevej, DK-4600 Køge (near Copenhagen).

Tel: **(53) 653370.** *Telex:* **43565.** *Fax:* **(53) 657009.**

Tanks ranging in capacity from 20 to 4,000 cubic metres make up this 15,000 cubic metres capacity facility. All petroleum products, solvents and chemicals can be stored. Some tanks heating-coiled and insulated; drumming facilities. Distribution by road, rail and sea, with berths for 12,000 tons dwt tankers.

Haltermann A/B (Sweden): Petroleumgatan 5, S-21124 Malmö.

Tel: **(40) 181220.** *Telex:* **32544.** *Fax:* **(40) 938485.**

This 20,000 cubic metre capacity terminal has tanks ranging in size from 20 to 2,000 cubic metres for all petroleum products, solvents and chemicals. Some tanks are stainless steel, coated, heating-coiled and insulated. Distribution by road, rail and sea.

IBL Bulk Liquids

110 Lime Street, Hull HU8 7AS, UK.

Tel: **(01482) 320736.** *Fax:* **(01482) 226162.**

132 storage tanks ranging from 50 to 830 cubic metres with a total capacity of 25,000 cubic metres. Specialises in the storage of non-hazardous chemicals, lubricating oil, additives and vegetable oils. The wharves are situated on the Hull River at Hull Forge Wharf and at 50-52 Lime Street, Hull. Facilities for receiving ex-road tankers or containers and good access to main roads leading to the M62. A 20 metre public weighbridge platform for weighing up to 60 tonnes and a road tanker steam-heating and cleaning service available on site.

The Independent Tank Storage Association (ITSA)

Executive Secretary: H.H. Cail, 24 Chiswick Quay, London W4 3UR, UK.

Tel: **(0181) 995 3393.** *Fax:* (0900-1800hrs) **(0181) 995 3393.**

The Association exists to give information and advice to government and other regulatory bodies in connection with the practical, safety and environmental health aspects of the bulk liquid storage industry. Membership is open to all companies operating in the United Kingdom whose main business is storage of bulk liquids for third parties. A minimum capacity of 50,000 cubic metres is required for full membership and all companies with over that amount are currently members of ITSA. Associate membership is available to those with less than 50,000 cubic metres capacity. ITSA is a founder member of the Federation of European Tank Storage Associations (FETSA) aimed at representing the industry and its particular characteristics in discussions with the EC on developing legislation.

King's Lynn Storage LTD

Head Office: PO Box No. 2, Melton Constable, Norfolk NR 24 2QR, UK.

Tel: **(01263) 860812.** *Fax:* **(01263) 861491.**

Terminal: Estuary Road, King's Lynn, Norfolk PE30 2HH, UK. Tel: **(01553) 764382.** *Telex:* **817018.** *Fax:* **(01553) 767942.**

The activities of King's Lynn Storage are twofold:

1. Having sold its main storage terminal to its principal customer, Kuwait Petroleum (GB) Ltd, it manages the

15,000 cubic metres terminal on behalf of KPGB.
2. King's Lynn Storage Limited operates another terminal comprising 10 storage tanks ranging from 55 cubic metres to 2,200 cubic metres with a capacity of 4,000 cubic metres. It is served from Bentinck Dock, King's Lynn, where KLS has access to three berths by agreement with Associated British Ports. The port can accommodate vessels up to 3,000 tonnes dwt. One 6 inch fully pigged product line leads from the berths to the terminal which is approved for the storage of petroleum products and chemicals. There are facilities for the discreet delivery of all products to road tank wagons. Office and warehouse space is available to meet customers' requirements.

La Petrolifera Italo Rumena SpA

Head Office: 40136 Bologna, Viale Aldini 190, Italy.
Tel: **(39) 51 331567.** *Telex:* **511549.** *Fax:* **(39) 51 332451.**
Terminal: Via Bajona, 260 – Porto Corsini-Ravenna, Italy Tel: (39) 544 538497 Telex: 550122 Fax: (39) 544 531535.
Total storage capacity for petro-chemicals and bulk liquids 80,000 cubic metres. 57 tanks ranging from 250 to 5,000 cubic metres for high and low flash products. Some tanks in stainless steel, some rubber or specially coated; nitrogen blanketing facilities; hot water system for accurate temperature control. Each tank has its own pump and line to loading racks and its own loading point to avoid any risk of mixing or contamination. Two vessel berths, both of which can accommodate vessels up to 180 metres in length and up to 8.5 metres (28 ft) draught. 16 pipelines, between 6 inches and 12 inches diameter (some insulated and of stainless steel) from berths to the storage tanks.

Noord Natie Terminals nv

Stadswaag 7-8, B-2000 Antwerp, Belgium.
Tel: **(32) 3232 99 40.** *Telex:* **31677.** *Fax:* **(32) 3 233 39 36.**
Situated in the port of Antwerp. There are 189 tanks ranging from 30 to 8,300 cubic metres, with a total capacity of 225,000 cubic metres for various bulk liquids including mineral and lubricating oils, vegetable and animal oils and fats and non-dangerous chemicals. Tanks are or can be equipped with heating coils, insulation and nitrogen blanketing facilities. Three mooring berths for seagoing vessels and a special dock for handling barges. Direct road and railway connections. Weighbridges up to 100 tonnes.

Nordic Tank Storage AB

Brännolljegatan, Skarvikshamnen, S-403 30 Gothenburg, Sweden.
Tel: **(46) 31 616190.** *Telex:* **27696 NORDIC S.** *Fax:* **(46) 31 616170.**
Nordic Tank Storage AB operates five terminals in Sweden.
Gothenburg: 113 tanks from 50 to 25,000 cubic metres with a total capacity of 541,000 cubic metres for petrol, gas oil, light and heavy fuel oils, bunkering oils, lubricating oils, chemicals, vegetable oils etc., blending and conditioning, as well as the storage of international oil consignments in transit. Access by sea, road and pipeline. Five tanker berths. We can handle vessels up to 280 metres in length with a draught of up to 13 metres. Our network of pipes is connected to the pipeline system of the refineries and the oil companies.
Gävle: 24 tanks from 25 to 35,000 cubic metres with a total capacity of 196,000 cubic metres for petrol, gasoil, light and heavy fuels, bunker oil, lubricating oils, chemicals, vegetable oils, etc., blending and conditioning, as well as the storage of international oil consignments in transit. Access by sea, road and pipeline. We can handle vessels up to 200 metres in length with a draught up to 10.4 metres.
Heisingborg: 12 tanks from 50 to 10,000 cubic metres with a total capacity of 34,000 cubic metres for petrol, gasoil and vegetable oils etc. Access by sea, road and pipeline. We can handle vessels up to 200 metres in length with a draught up to 10.4 metres.
Norrköping: 36 tanks from 30 to 3,000 cubic metres with a total capacity of 14,000 cubic metres for chemicals, petrol, gasoil etc. Access by sea, road and pipeline. We can handle vessels up to 190 metres in length with a draught up to 8.4 metres.
Trelleborg: 9 tanks from 20 to 3,500 cubic metres with a total capacity of 12,000 cubic metres for gasoil, fuel oil, lubricating oils, chemicals, molasses etc. Access by sea and road. We can handle vessels up to 175 metres in length with a draught up to 7 metres.
Nordic Tank Storage AB has an exclusive marketing agreement regarding the following terminals for petroleum products and chemicals:

Kalmar	33,000 cubic metres
Nynåshamn	40,000 cubic metres
Söderhamn	26,000 cubic metres
Sundsvall	16,000 cubic metres
Umeå	13,000 cubic metres
Västerås	12,000 cubic metres
Härnösand	8,000 cubic metres

Oil Rail Terminals (Leeds) Ltd

South Accommodation Road, Leeds LS9 0RT, UK.
Tel: **(01132) 480574.** *Fax:* **(01132) 400762.**
Head Office: Haynes Road, Cadishead, Manchester M30 5BX.
Part of the BTP plc group of companies. Thirty-two acre site only one mile from M1 and M62 motorways. Liner trains of up to 2,000 tonnes are received in modern sidings and discharged at 500 tonnes per hour. Equipped with high-speed, self-service road vehicle loading bays. Products stored in mild steel tanks ranging from 600 to 6,000 cubic metres. Total tank capacity of over 20,000 cubic metres in 10 tanks. Complete range of low and high flash petroleum fuels.

Oil Tanking GmbH

Admiralitätstraße 55, D-20459, Hamburg, Germany.
Tel: **(49) 40 370990.** *Fax:* **(49) 40 37 099199.**
Oiltanking has a total storage capacity of 5.6 million cubic metres. The company operates seven seaport terminals, designed for rapid handling, in Amsterdam, Ghent, Copenhagen, Hamburg, Houston, Malta and Singapore. All terminals occupy key positions in the international oil storage business and are backed by a dense network of nine German inland terminals. Deepwater terminals and inland storage facilities can be combined, permitting a wide variety of solutions for individual problems. The Amsterdam terminal in particular plays an important role in the distribution of high and low flash products in North-West Europe and the United Kingdom. Vessels up to 85,000 dwt are handled at this terminal and their cargoes redistributed on coasters and barges. Extensive product treatment facilities for the blending, leading, upgrading

We'll give you the world

Our unique combination of extensive international experience and attitude to service makes us well worth knowing.

Paktank is one of the world's leading bulk storage suppliers for crude oil, mineral oil and chemical products. Operating from headquarters in Rotterdam, the Netherlands, we have a worldwide storage capacity of more than 90,000,000 barrels. Our terminals are not only in Western Europe and the USA; you will also find us in Eastern Europe, North Africa and South East Asia, where we continue to make significant investments.

Besides storage, we are able to provide a wide range of related services like upgrading, blending and distillation.

Our highly trained workforce knows how to handle our state-of-the-art equipment, supported by the latest information technology. Making us more cost-effective in terms of productivity and more flexible when it comes to meeting your exact requirements. But then, you would expect no less from a company in the Royal Pakhoed Group, with nearly 400 years of unrivalled experience in looking after customers.

Paktank

As adaptable as you need us to be

For further information, please contact:

Paktank Corporation
2000 West Loop South, Suite 2200, Houston, Texas 77027, USA.
Tel. +1 713 623 0000, Fax +1 713 623 4480.

Paktank Oil Nederland B.V.
Oude Maasweg 6, Portnr. 4040, 3197 KJ Rotterdam, The Netherlands.
Tel. +31 10 400 21 30, Fax +31 10 438 73 90.

Paktank Chemical Nederland B.V.
Chemieweg 13, Port nr. 4212, 3197 KC Rotterdam, The Netherlands.
Tel. +31 10 472 44 00, Fax +31 10 416 26 98.

Paktank International Storage & Development B.V.
Blaak 333, 3011 GB Rotterdam, The Netherlands.
Tel. +31 10 400 22 37, Fax +31 10 213 00 63.

Paktank Asia Pacific, Ltd.
Hong Kong office: 25th/Floor, Jubilee Building, 18 Fenwick Street, Wanchai, Hong Kong.
Tel. +852 2 527 6408, Fax +852 2 527 6842.

and downgrading of gasoline are also available.

The Malta facility with 359,000 cubic metre tank capacity is the first public terminal to be located so near to the primary trade route between the Suez Canal and Gibraltar, with connections to ports in Europe, the Middle East, Africa, the United States and the Black Sea. Oiltanking Malta is located in the Malta Freeport complex on Marsaxlokk Bay, so in-route products may be shipped in, stored, blended and shipped out duty-free at Malta.

Taking into account the importance of Ghent concerning the storage of chemicals, the storage capacity at our Ghent terminal for such clean products will be increased by 93,000 cubic metres. Installation of the tanks varying from 800 to 12,000 cubic metres was completed and first operations started mid-1994.

Further investments are being made in the German market.

In the centre of the west German industrial region of Ruhrgebiet, Oiltanking acquired its ninth German terminal at Duisburg. Located at the Rhine near to the Dutch border, the site offers excellent connections to other German regions and the Benelux countries. Activities under Oiltanking's management started mid-1993. In the first phase a total storage capacity of 15,000 cubic metres for gasoline and 20,000 cubic metres for gasoil is available.

The location of Oiltanking Gera in Thuringia/East Germany affords good storage opportunities in this region. The storage capacity has been increased by 50,000 cubic metres for gasoline and 14,000 cubic metres for gasoil, totalling up to 104,000 cubic metres by mid-1996.

In September 1993 Oiltanking acquired from Cepsa France a 58,000 cubic metre storage terminal in Annay-sous-Lens situated on the Canal de la Deule in Northwest France. This terminal can accommodate all petroleum products and can be supplied by barges up to 3,000 tonnes ex A-R-A and Atlantic coast refineries.

In March 1994 Oiltanking acquired a 51 percent interest in Ebytem S.A., a 480,000 cubic metre oil storage terminal approx. 650 km southwest of Buenos Aires, Argentina. This terminal has an annual throughput of about 14.5 million cubic metres of crude oil coming in by pipeline from the Neuquen Basin or by tankers at the terminal's two deep water mono-buoys. The terminal supplies all of the crude oil requirements of the large YPF refinery in the Buenos Aires area.

Germany

Hamburg: Fifty four tanks, sizes 2,000 to 50,000 cubic metres. Total capacity 600,000 cubic metres. Low/high flash petroleum products and heavy fuel oil storage. Sea, barge, rail and road. Berth for tankers up to 85,000 dwt.

Berlin: Thirty tanks, sizes 1,600 to 25,000 cubic metres. Total capacity 349,000 cubic metres. Low/high flash petroleum products. Barge, rail and road.

Karlsruhe: Thirty nine tanks, sizes 600 to 20,000 cubic metres. Total capacity 177,000 cubic metres. Low/high flash petroleum products and LPG storage. Barge, rail and road.

Bendorf: Twenty two tanks, sizes 2,000 to 20,000 cubic metres. Total capacity 145,000 cubic metres. Low/high flash petroleum products. Barge, rail and road.

Frankfurt: Twenty five tanks, sizes 95 to 5,000 cubic metres. Total capacity 50,000 cubic metres. Low/high flash petroleum products and chemical products. Barge, rail and road.

Honau: Twelve tanks, sizes 5,000 to 20,000 cubic metres. Total capacity 115,000 cubic metres. Low/high flash petroleum products. Barge, road and pipeline.

Duisburg: Six tanks, sizes 5,000 to 20,000 cubic metres. Total capacity 35,000 cubic metres. Low/high flash petroleum products. Barge, rail and road.

Hamm: Eight tanks, sizes 3,000 to 15,000 cubic metres. Total capacity 76,000 cubic metres. Low/high flash petroleum products. Barge, rail and road.

Gera: Four tanks, sizes 10,000 cubic metres. Total capacity 40,000 cubic metres. High flash petroleum products. Rail and road.

The Netherlands

Amsterdam: Fifty three tanks, sizes 690 to 40,000 cubic metres. Total capacity 800,000 cubic metres. Low/high flash petroleum products, heavy fuel oil, crude oil, components, feedstocks and molasses. Sea, barge, road, rail and pipeline. Berth for tankers up to 85,000 dwt.

Belgium

Ghent: Fifty five tanks, sizes 800 to 47,250 cubic metres. Total capacity 700,000 cubic metres. Low/high flash petroleum products, feedstocks, chemical products, fertilisers and edible oils. Sea, barge, rail and road. Berth for tankers up to 65,000 dwt.

Denmark

Copenhagen: Thirty nine tanks, sizes 1,600 to 16,500 cubic metres. Total capacity 339,000 cubic metres. Low/high flash petroleum products, heavy fuel oil and slop oil. Sea, coaster and road. Berth for tankers up to 40,000 dwt.

Malta: Seventeen tanks, sizes 500 to 35,000 cubic metres. Total capacity 359,000 cubic metres. Low/high flash petroleum products, components and feedstocks. Berth for tankers up to 120,000 dwt.

Omni-Tank GMBH

Marienstraße 20 40212 Düsseldorf, Germany.
Tel: **(49) 211 350515** *Fax:* **(49) 211 357697**

Breisach: 23,400 cubic metres. 15 tanks ranging from 100 to 5,000 cubic metres for storing petroleum products. Access for barges and road tank cars.

Essen: 112,000 cubic metres. 39 tanks ranging from 600 to 12,000 cubic metres for petroleum products, chemical and petrochemical liquids and solvents. Insulated, coiled and coated tanks are available and equipped with dedicated pipelines, heating and blending facilities. Access by road, rail and barge.

Hanau: 48,000 cubic metres. 23 tanks ranging from 360 to 3,750 cubic metres for gasoline, gas oil, jet fuel and petrochemical liquids. Blending facilities are available. Access by road, rail and barge.

Karlsruhe: 51,000 cubic metres. 19 tanks ranging from 650 to 3,000 cubic metres for petroleum products and petrochemical liquids. Access by road and rail tank cars (liner trains) and barges.

Speyer: 796,000 cubic metres. 57 tanks ranging from 2,000 to 60,000 cubic metres for all petroleum products, chemicals and petrochemical liquids, liquefied gases and solvents. Blending facilities are available. Access by road, rail (liner trains), barge and pipeline (CEPS).

Paktank Chemical Nederland BV

Chemieweg 13, Portnumber 4212, 3197 KC Botlek Rotterdam, The Netherlands.
Tel: **(31) 10 472 4400.** *Telex:* **28507.** *Fax:* **(31) 10 472 4903**

Paktank Chemical Nederland BV, a 100% subsidiary of Royal Pakhoed NV., operates five ISO9002 certified terminals in the Netherlands: four terminals within the Port of Rotterdam and one terminal at the adjacent Port of

Dordrecht.

Products stored:

Chemicals, lubricating oils, edible oils & fats and oleochemicals.

Terminals and capacities for these products:

Rotterdam:

Paktank Botlek terminal: 550,000 cubic metres

Paktank TTR terminals : 325,000 cubic metres

Paktank Chemiehaven terminal: 200,000 cubic metres

Paktank Pernis terminal: 350,000 cubic metres

Dordrecht:

Paktank Dordrecht terminal: 200,000 cubic metres

Available tankage: Mild steel, stainless steel, aluminium, coated, heated, insulated.

Tanksizes: from 300 to 40,000 cubic metres.

Access: Ships, barges, road, rail.

Other facilities: Dedicated and multi-purpose piggable lines, drumming and blending, nitrogen blanketing, custom processing.

With the multi-terminal structure within the Rotterdam/Dordrecht harbour, Paktank offers maximum flexibility to their customers.

Paktank International BV

PO Box 7300, 3000 HH Rotterdam, The Netherlands.
Tel: **(31) 10 400 2911.** *Telex:* **22163.** *Fax:* **(31) 10 413 9829.**

The world's largest independent tank storage company, providing bulk storage and related facilities to the chemical and oil industries. Around 13 million cubic metres of tank storage capacity at terminals in Western Europe and further capacity in the United States, Tunisia and Singapore (including capacity of partners). All Panocean terminals with the exception of those in the United Kingdom are now owned by Royal Pakhoed NV, our parent company. Broere and ACS Antwerp are also 100 percent owned by Royal Pakhoed NV.

The Netherlands

Botlek (Rotterdam): 1,576,000 cubic metres capacity; access by sea, road, rail and pipelines; 39ft 6in draught sea berths, storage for petroleum products, chemicals and specialised liquids.

Europak (Rotterdam): 1,973,000 cubic metres; sea, pipelines; 68ft; crude oils and petroleum products. Able to receive vessels up to 72ft via the Maasvlakte terminal.

Laurenshaven (Rotterdam): 926,000 cubic metres; river, pipelines; petroleum products.

NOM/Pernis (Rotterdam): 150,000 cubic metres; sea, road, rail; 38ft 10in; petroleum products, chemicals, aromatics.

Maasvlakte Oil Terminal CV (Rotterdam): 4,400,000 cubic metres; sea, pipelines; 72ft; crude oils.

Sweden: Goteberg; 75,000 cubic metres; sea, road, rail; 36ft; petroleum products, chemicals, lubricating oils, molasses, latex.

Sodertalje: 117,500 cubic metres; sea, road, rail; 32ft; petroleum products, asphalt, chemicals, vegetable and animal oils and fats.

Malmo: 24,000 cubic metres; sea, road, rail; 36ft asphalt, petroleum products, chemicals.

Germany

Neuss: 58,000 cubic metres; river, road, rail; petroleum products, chemicals.

Tollerort and Hohe Schaar (Hamburg) and Kiel: See under VTG Paktank Hamburg GMBH.

USA: 1,350,000 cubic metres; chemicals.

Singapore: 830,000 cubic metres; oil storage.

Estonia (Tallinn): 57,000 cubic metres; oil storage (construction completed 1st phase). 40,000 cubic metres; oil storage (to be completed end of 1994).

Thailand: 87,000 cubic metres; chemical and naphtha storage (operational). 40,000 cubic metres; chemical and naphtha storage (to be completed end of 1994).

Tunisia: 300,000 cubic metres; oil products.

Pinnacle Storage

Choats Road, Dagenham, Essex RM9 6PU, UK.
Tel: **(0181) 593 7211.** *Fax:* **(0181) 593 1632.**

Owned by Transport Development Group plc (TDG) and formerly known as London & Coastal Oil Wharves Ltd.

Dagenham terminal: Situated between London and Dartford River Crossing. The nearest major privately-owned storage treminal on the Thames to London and has direct access to M25/M11/M1/M20/M2 networks. The terminal operates 236 tanks with a total capacity of 115,000 cubic metres and these include mild, stainless steel and epoxy lined tanks, suitable for storage of all chemicals, edible oils, lube oil and pharmaceutical products. The site is operated 24 hours a day at no extra charge.

Jetty facilities include 42 segregated jetty lines (pigged stainless and mild steel), and berthing facilities for vessels of up to 228 metres LOA and 40,000 tns dry weight with 10m of water at low tide.

Blending facilities for lubes, anti-freeze and other products are available and a recent investment in a computerised drumming facility guarantees containers are drummed off overnight.

The terminal has a modern workshop, weighbridge, radio communications and fully computerised stock accounting.

Pinnacle Storage

The site is certified to BS EN ISO 9002 and has its own NAMAS accredited laboratory which offers independent ASTM, IP and BSI standards of testing for petroleum, chemical and water products.

PL Transtore LTD

Riverside House, East Street, Birkenhead, Wirral, Merseyside L41 1 BY, UK.
Tel: **(0151) 647 4111.** *Fax:* **(0151) 666 2136.**

PL Transtore Ltd is a subsidiary of Acatos and Hutcheson PLC. As an independent company our dedicated tank farms can accommodate a variety of diverse bulk liquids. Our three piggable discharge lines feed mild steel tanks which are lagged and fully serviced, and range in size from 50 to 1000 tonnes with a maximum capacity of 20,000 cubic metres. Processing Divisions can offer the facility of custom designed plant for rotary vacuum filtration, separation, acid refining, drum filling and depackaging. Laboratory services use the latest analytical techniques and equipment. We also operate a fleet of modern stainless steel roadtankers which are available on long-term contract or spot hire and can carry low/medium hazard and edible (SCOPA Registered) products.

Powell Duffryn Terminals LTD

Commercial Enquiries: C. Scott, Commercial Director, Powell Duffryn House, London Road, Purfleet, Essex, RM19 1PR UK.
Tel: **(01708) 865701.** *Fax:* **(01708) 868983.**

Operates three terminals in the United Kingdom, all registered to BS: EN: ISO 9002.

Barry (South Wales): High and low flash tankage, for petroleum and chemical products, with a total capacity of 113,000 cubic metres. Tanks constructed in mild steel and sized from 20 to 14,400 cubic metres – many lined, lagged and coiled, using stainless steel fittings when required. Three tanker berths with a minimum depth of 9.8 metres (32ft), served by over 15 pipelines in stainless or mild steel, lagged and traced as required. This location is ideal for supplying the industrial areas of South Wales, the South of England, the Midlands and the North-West.

Ipswich (Suffolk): High and low flash storage for petroleum and chemical products; tanks from 50 to 10,000 cubic metres with a total capacity of 89,000 cubic metres. Many tanks lined, lagged and coiled. Three tanker berths with a minimum depth of 7.9 metres (26ft), using both stainless and mild steel pipelines. Road loading bays serving co-mingled white oil tanks being upgraded to include bottom loading facilities.

Purfleet (Essex): Two jetties: the main six berth private jetty with a minimum depth of 10.5 metres (35ft) can accept vessels of up to 45,000 tonnes displacement and a maximum length of 800ft; a smaller upstream jetty is dedicated to carbon dioxide gas tankers. High and low flash tankage for petroleum and chemical products, with a total capacity of 269,000 cubic metres. Tank sizes from 50 to 15,000 cubic metres, stainless or mild steel; many lined, lagged and coiled, using stainless steel fitments when required. Fourteen stainless and mild steel fully piggable shipping lines; many are lagged and traced for heated products. Rail siding accepts up to 12.100 tonne railcars.

Propetrol

Head Office: 65 Quai Jacoutot, BP 13, F-67013 Strasbourg Cedex, France.
Tel: **(33) 88 45 90 10.** *Telex:* **880078.** *Fax:* **(33) 88 45 90 20** and **(33) 88 45 90 30.**

Contact: Mr E. Elkouby (Directeur Commercial).

Propetrol, a subsidiary of the Petrofrance group of companies, is an independent petroleum and chemical storage company with terminals in:

Strasbourg (two locations), Village Neuf (near Basle), Gergy (near Chalon-sur-Saône), Villeneuve-La-Garenne (8 km north of Paris) and Salaise-sur-Sanne (southern end of the Rhône's chemical corridor).

Together these terminals represent a total storage capacity of about 200,000 cubic metres of bulk petroleum products, 60,000 cubic metres of bulk liquid chemicals and petrochemicals and over 6,000 sq. metres of warehousing for the storage of drummed and packaged chemicals.

All terminals are located on major waterways: Rhine, Saône, Rhone and Seine Rivers, with complete rail and motorway access.

As regards the Salaise-sur-Sanne Terminal, the first units, comprising five mild and stainless steel tanks ranging in capacity from 365 to 4,080 cubic metres, entered service in March this year. It is anticipated that a second development will eventually be undertaken involving the addition of a further 6,400 cubic metres in six tanks sized between 650 and 1,470 cubic metres.

Services available: Tank-truck loading/unloading, heated and insulated tanks and pipes, tanks equipped with recirculating systems, tanks equipped with innerfloating screens, inert gas blanketing (nitrogen), petroleum products dyeing, blending of oils and fuels, heat supply, tank-truck weighing, bunkering of barges with tank-trucks and customs services.

Pusback u.Morgenstern Petrotank

Neutrale Tanklager-Ges.mbH u. Co. KG, Barkhausenstraße. 35-43 D-27568 Bremerhaven, Germany
Tel: **(49) 471 9 4690.** *Fax:* **(49) 471 9 4690-90.**

Petrotank is an independent company in northern Germany, which owns and operates storage installations at Bremen, Bremerhaven, Nordenham-Blexen, Oldenburg (river Weser), Hanover, Hildesheim, Braunschweig (Mittelland-Kanal) and Trier (river Mosel). Total capacity about 176,000 cubic metres. Seagoing vessels are possible at: Nordenham-Blexen: draught max 32ft, LOA 170m. Bremen: draught max 31ft, LOA 150m.

There are barge, rail and truck facilities available in the other terminals.

Storage of heavy fuels, gas oil, urea and other liquid products.

Ross Chemical & Storage Co LTD

Grange Dock, Grangemouth, Scotland UK. FK3 8UD
Tel: **01324 474774.** *Fax:* **01324 485476.**

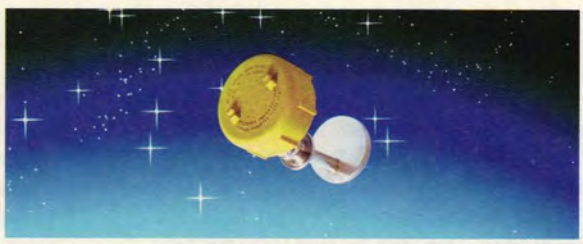
Grange Dock, Grangemouth: Sixty tanks ranging from 800 to 2,650 cubic metres for fuel oils, motor spirits, petrochemicals, aviation fuel and molasses. Served by a common user jetty with mild and stainless steel jetty lines. The jetty is capable of handling ships up to 20,000 tonnes dwt. Distribution by road from both top and bottom loading racks.

SmartRadar: The Next Generation.

Using radar tank-gauging equipment used to be a complex task. Parabolic and horn antennas were oversized and difficult to work with. And regular adjustments were necessary to compensate for drift.

That was before the arrival of the ENRAF SmartRadar with digital planar technology (DPT). Originally developed for satellite use, DPT enables the SmartRadar to adjust automatically to conditions that can distort measurement readings. As a result, you get level accuracy to within 1 mm (0.04").

Compact and easy to install, the SmartRadar can relay data to any field location desired or directly to your desk in the central control room. Digitally. Now all you need to do is sit back, relax and count the stars.



ENRAF DELFT INSTRUMENTS

ENRAF

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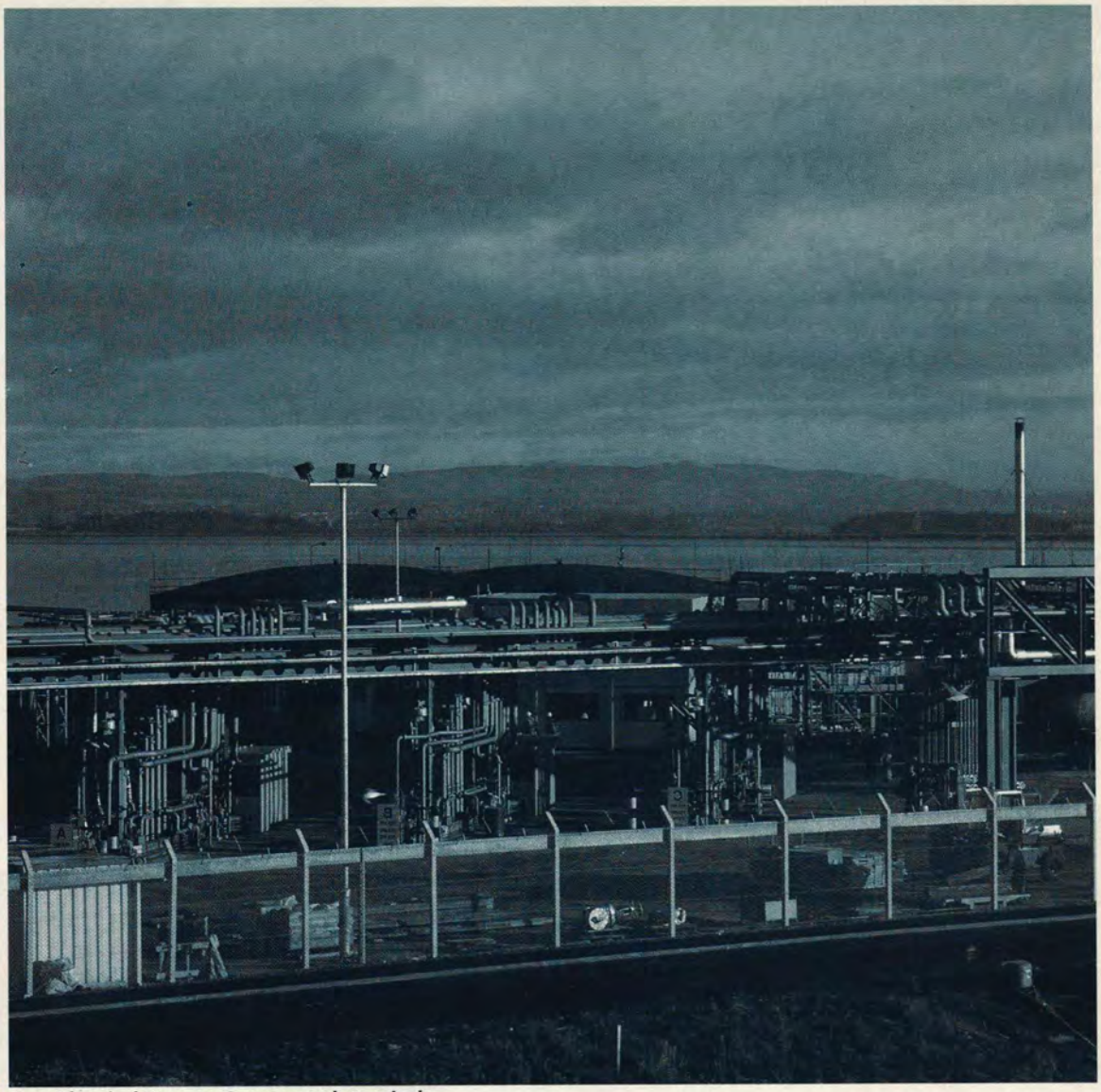
Fax +31-15-619574	Fax +1-713-4436776	Fax +49-212-587549	Fax +33-1-45092287	Fax +65-7694348	Fax +44-1-727-842185

BULK STORAGE '95



Ross Chemical Storage, Grangemouth terminal

Simon Storage Group

Priory House, 60 Station Road, Redhill, Surrey RH1 1PH UK.
Tel: **(01737) 778108.** *Telex:* **58218 SSTOR G.**
Fax: **(01737) 778112.**

Simon Storage manages storage investments in the United Kingdom and Eire for Simon Engineering plc, some of which are in joint venture with the Van Ommeren Tank Terminals. All enquiries regarding the operating companies should be addressed to Simon Storage.

Simon Management: Simon Storage also provide comprehensive facilities management services for the oil industry including aviation into plane services, terminal, oil and gas pipeline management, and onshore oilfield operation. The company now has in excess of 1,200,000 cubic metres under its management.

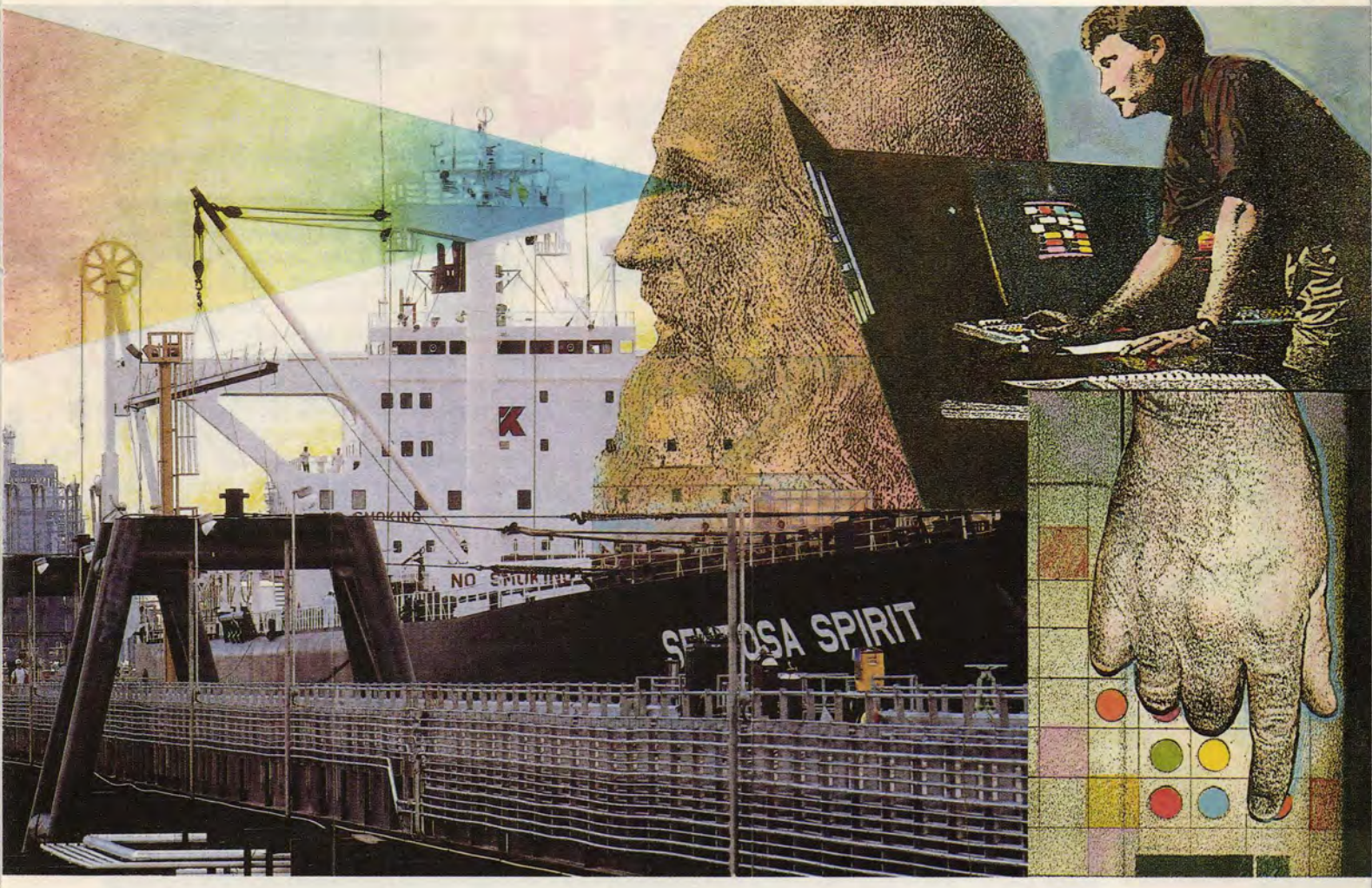
Cumbria Terminal: Prince of Wales Dock, Workington, Cumbria.
Tel: **(01900) 605151.** *Telex:* **64331 CSTORR G.**
Fax: **(01900) 67986.**

31,581 cubic metres for petroleum products and chemical storage. Transport by road, rail and sea. Ships Agency: Workington – can handle 10,000 tons dwt vessels and provides excellent port facilities for deliveries to or from North West England and Southern Scotland.

Immingham Terminals: Immingham Docks, Nr. Grimsby, South Humberside.
West: Tel: **(01469) 572615.** *Telex:* **52291 ISCOL G.** *Fax:* **(01469) 577019.**
East: Tel: **(01469) 571241.** *Telex:* **527931 ISCEA G.** *Fax:* **(01469) 41012.**

Simon Storage operates two installations at Immingham Dock (East and West). More than 300 tanks with a total capacity of 570,000 cubic metres, making it the largest independent bulk storage terminal in the United Kingdom. Included in this figure are pressure storage for gases, stainless steel, lined, lagged and steam heated tanks. More than 60 jetty lines, including six stainless steel, provide for excellent segregation of grades. Use is made of two jetties: Eastern and Western. The terminal is connected to the Humber refineries and chemical plants by pipelines. The jetties have 35ft draught and can accommodate up to 35,000 tonnes dwt tankers, coasters or barges. Transport by road, rail, sea and pipeline. The company has land available for expansion to meet customers' special requirements at Immingham. New tankage under construction.

Seal Sands Terminal: Seal Sands, Middlesbrough, Cleveland, TS2 1UB.
Tel: **(01642) 546775.** *Telex:* **58218 SSTOR G.** *Fax:* **(01642) 546076.**



We Wouldn't Mind If Da Vinci Paid A Visit.

In fact, we think Leonardo would be quite impressed with the new technologies of today's Oiltanking terminals. Since he foresaw automation, we'd show him the hydraulic, articulated loading arms. And point out the advantages of our computerized control rooms: better in/out efficiencies, contamination-free product handling. Then we'd invite him to sit in as our professional engineering teams explore even more ways to customize the best of modern science to better serve our customers. Da Vinci might admire Oiltanking technology. You, however, can profit from it.

Oiltanking

The Art And Science Of Uncommon Service

Europe
Tel: 49-40-370-990
Fax: 49-40-370-99199

The Americas
Tel: 713-457-7900
Fax: 713-457-7991

Far East
Tel: 65-473-1700
Fax: 65-479-4500

Over 100 tanks with a total capacity of 196,400 cubic metres for petroleum products, chemicals including molten sulphur, VCM and LPG's and a wide range of edible or specialist products. Two jetties, one taking vessels up to 30,000 tonnes dwt. The terminal is connected to local chemical plants by pipeline. Transport by road, rail and sea. Block trains handled.

Shannon Terminal: Foynes Harbour, Foynes, Co. Limerick, Eire.
Tel: **(00 353) 69 65506.** *Fax:* **(00 353) 69 65601.**
One installation. 14,000 cubic metres for petroleum and chemical products on the River Shannon. The jetty can accommodate 20,000 tonne tankers and facilities are included for the loading to road tank wagons and the supply of products to barges at the jetty. Land available for expansion of the terminal.

Tyne Terminal: Northumberland Dock, North Shields, Tyne and Wear, NE29 6DY.
Tel: **(0191) 296 0999.** *Telex:* **53180 VELVA G.** *Fax:* **(0191) 258 6996.**
Total capacity 54,704 cubic metres. Fifty mild steel tanks, ranging in capacity from 300 to 8,600 cubic metres for chemicals, gasolines and oils. Blending facilities. Many tanks are cooled. Ethanol bonded storage available. Some tanks are coated with epoxy or phenolic resin-based paints. Additional land is available for further development and construction to suit particular client requirements. Access by sea and road. Three berths at North Shields provide for vessels up to 10 metres draught. There is rapid access to major road networks for road tankers. Licences to handle chemical wastes. New tankage under construction.

Sogestrol

Head Office: Route de la Chimie, 76700 Gonfreville l'Orcher, France.
Tel: **(33) 3553 3770.** *Telex:* **190582.** *Fax:* **(33) 3553 3694.**
Jointly owned by the SOGESTRAN Group and LBChimie.
Two terminals, with a total capacity of 340,000 cubic metres, located in the industrial area of Le Havre Port, near chemical and petrochemical plants, and reserved exclusively for chemicals and petrochemicals and all dangerous liquids. Tanks are insulated, coated, heated, refrigerated, of mild and stainless steel, with traced insulated lines. Nitrogen facilities. Tanks from 5,000 cubic metres have a floating roof. Access by road, rail, sea, river. Connections with certain local plants.
Terminal No. 1: 161 tanks from 50 to 15,000 cubic metres. Three jetties, draught of 38ft for 50,000 ton ships, length 250 metres. Reception from and delivery to

Simon Storage's bulk liquid and gas srorage facilities at Immingham on the Humber

ships, barges, road containers, rail cars and drums. Drumming and pipelines to local industries.

Terminal No. 2: 52 tanks from 315 to 4,900 cubic metres including nine tanks from 315 to 2,200 cubic metres of stainless steel. Three jetties, draught of 38ft for 40,000 tonne ships. Reception from and delivery to ships, barges, road containers and rail cars. Drumming station connected to tanks; facility to drum directly to road containers and rail cars. The terminals are both certified ISO 9002 since February 1992 by Lloyd's Register Quality Assurance.

Sotrasol

157, avenue Charles de Gaulle, 92521 Neuilly Sur Seine, France.

Tel: **(33) 1 47 47 51 00.** *Fax:* **(33) 1 46 41 03 27.**

A subsidiary of LBChimie Group, SOTRASOL operates two terminals:

Tarnos (Port de Bayonne): 101,000 cubic metres capacity for chemical liquids, crude oil, liquid fertilisers, animal and vegetable oils and fats. Seventeen tanks from 640 to 15,000 cubic metres, some stainless steel, some with heating coils or insulation. Nitrogen blanketing facilities. Access by road, rail and sea (two jetties with draught up to 28ft). The terminal is certified ISO 9002 since July 1992 by Lloyd's Register Quality Assurance.

Le Havre: One hundred tanks from 30 to 5,000 cubic metres, with a total capacity of 105,000 cubic metres for mineral oils, chemical products with a flash point of over 100°C, liquid fertilisers, molasses, natural and synthetic latex and vegetable and animal oils and fats. Tanks are partly stainless steel, some heated and insulated. Access is by road, rail and sea (three berths, maximum draught 38ft). Certified ISO 9002 by Lloyd's Register Quality Assurance.

South Western Tar Distilleries LTD

High Street, Totton, Southampton SO40 4TN UK.

Tel: **(01703) 663444.** *Fax:* **(01703) 873429.**

Located at Totton in the Port of Southampton, SWTD has over 125 tanks in a range of sizes up to 7,000 cubic metres. Total storage capacity is 36,000 cubic metres with planning permission for further expansion. Some tanks are stainless steel and a wide range of chemicals and oil products are handled ranging from low flash products including crude oil up to and including fuel oils and bitumen. Many tanks are insulated and heated. A comprehensive blending service is also offered for aqueous and solvent products together with a complete drumming and warehousing service.

The site has its own rail sidings and jetty facility with capacity to take up 2,000 tonnes of high or low flash products and is immediately adjacent to the M271 with direct links to the M27 and M3 motorways. The terminal is quality appproved to BS EN ISO 9002:1994.

A smaller storage facility (5,000 cubic metres) is also available at Hertford.

Tanquipor, LDA

Head Office and Installation: Parque Industrial do Berreiro, Caixo Postal 5158, - 2830 Barreiro Portugal.

Tel: **(351) 1 2060348.** *Fax:* **(351) 1 2078577**

The tank terminal, located in the Port of Lisbon, has a total capacity of 87,000 cubic metres for storing ammonia, chemicals and petroleum products. Maximum draught at the jetty is approximately 32ft at high tide.

Tanklager Gesellschaft Mannheim mbH

Essener Str. 64, D-68219 Mannheim, P.O. Box 81 04 06, D-68204 Mannheim, Germany.

Tel: **(49) 621 89 98 0** *Fax:* **(49) 621 80 14 17**

The Tanklagergesellschaft HOYER mbH, Mannheim, was founded in 1959 and operates large scale, modern, independent tank depots at Mannheim-Rheinau and at Mannheim-Handelshafen.

Mannheim, the second largest river port in Europe, lies in the heart of Germany – ideally situated for inland tank storage. Apart from the Rhein-Main area and South Germany, Mannheim allows economical access to Eastern France and North Switzerland.

Both the tank storage depots have access to waterways, rail terminals and the motorway network.

The tank storage depot Mannheim-Rheinau has a total of 230,000 cubic metres tank space, and the storage depot in Mannheim-Handelshafen has over 68,000 cubic metres. The tank space of both of these can be extended by a further 50-80,000 cubic metres.

The capacity of the individual tanks is between 50 and 22,000 cubic metres.

Modern cargo handling area with 8,000 sq. metres storage space at Mannheim-Handelshafen are particularly suitable for the storage and transhipment of bulk and IBC packed chemicals and other goods. Large open plan storage areas with ramp access are available for the storage of drums.

All tanks are equipped with a separate pipeline system, which ensures the independent treatment of each product to a high standard. Besides black steel tanks, the TLG storage depots at Mannheim-Rheinau and at Mannheim-Handelshafen can also offer stainless steel tanks with a capacity of 8,500 cubic metres, tanks with special cladding, insulation and facilities for nitrogen supply.

In addition to expert storage of a wide variety of products, such as fuel oils, chemicals, molasses, vegetable and animal fats, TLG offers all other services connected with its handling and transportation: customs clearance, quality control, weight control, tank checking and drum filling.

Delivery and despatch can be made by ship, rail or road. TLG offers direct transhipment by ship/tank car as well as a complete rail service.

Ever since the opening of the storage depots, special attention has been paid to safety aspects. The most modern facilities guarantee swift and safe transhipment.

The years of experience which the TLG team have in handling a variety of products, together with modern technology, ensures safety – safety for the products and safety for the environment.

Well trained staff deal with even the most unusual problems in a professional manner.

Tees Storage Company LTD

Seal Sands, Middlesbrough, Cleveland TS2 1UA, UK.

Tel: **(01642) 546767** *Telex:* **58477.** *Fax:* **(01642) 546222**

Jointly owned by Royal Pakhoed Holding NV and GATX Corporation. Operates a terminal at Seal Sands.

128 tanks from 55 to 8,500 cubic metres, with a total capacity of 200,000 cubic metres. Mild steel coated and stainless for petroleum and chemicals. One sphere of 6,650 cubic metres for Vinyl Chloride Monomer. Road, sea and pipelines to neighbouring plants. Provision for rail. Drumming facilities. Three jetties for ships up to 40,000 dwt. Maximum length 760ft, maximum draught 36ft. 30 docklines (15 stainless steel).

Terminales Quimicos de Santander, S.A.

Santa Cruz De Marcenado, 31-1º 28015 – Madrid, Spain.
Tel: **(34) 1 547 30 27.** *Fax:* **(34) 1 542 13 91**

Operates one terminal in Santander (Spain). 75 tanks from 100 to 2,500 cubic metres. High and low flash chemicals, petroleum products and vegetable oils. Heating: N_2 blanketing, insulated and coated tanks. Total capacity 65,000 cubic metres. Access by rail, road and sea with 40 ft draught private jetty.

Terminales Quimicos, S.A. (Terquimsa)

Plaza de Colon Nr.2. Torre-I 9º - A 28046 Madrid, Spain.
Tel: ***(34) 1 310 11 76.*** *Fax:* ***(34) 1 308 33 04.***

Located at Tarragona Port with a capacity of 130,000 cubic metres for chemical and petroleum products, vegetable oils. Automatic drumming, bonded storage. Heating, refrigeration, gas blanketing, coated and SS tanks. Transhipment facilities.

Van Ommeren Bragtank AG

Head Office: Westquaistraße 12, CH 4019 Basle, Switzerland.
Tel: **(41) 61 31 44 22.** *Fax:* **(41) 61 631 16 92.**

Van Ommeren Bragtank AG, a member of the Van Ommeren group, has one installation in Switzerland.

Basle: The terminal has 63 tanks with a total capacity of 346,000 cubic metres. All mineral oils can be stored. There are six jetties for barges. Access is by river, road and rail. Steam and oil heating is provided and there are bunkering facilities for barges.

Van Ommeren Tank Terminals (VOTT)

Head Office: 10 Westerlaan, 3016 CK Rotterdam, The Netherlands.
Tel: **(31) 10 464 2346.** *Telex:* **21435 VONL.** *Fax:* **(31) 10 464 2819.**

VOTT is part of Royal van Ommeren NV, with a worldwide capacity of 11,250,000 cubic metres. It has 30 terminals situated in 16 countries.

THE NETHERLANDS:

Botlek (Port of Rotterdam): 940,000 cubic metres capacity; access by road, rail, sea and inland waterways and pipeline; 41 ft draught; storage for chemicals, petrochemicals and petroleum products; pipeline connections to adjacent refineries, CEPS and Van Ommeren Tank Terminal at Europoort.

Europoort (Port of Rotterdam): 800,000 cubic metres capacity; access by road, inland waterways, sea and pipeline; 71 feet draught; storage for petroleum products; pipeline connection to CEPS, Van Ommeren Tank Terminal Botlek and adjacent refineries.

Vlaardingen (Port of Rotterdam): 435,000 cubic metres capacity; access by road, rail, sea and inland waterways; 40 ft draught; storage for animal and vegetable oils and fats, petrochemicals and molasses.

BELGIUM

Antwerp: Gamatex is a 50/50 joint venture between GATX Terminals and operates one terminal in Antwerp, Belgium. The terminal offers 147 tanks with a total capacity of 486,000 cubic metres for clean mineral oils, chemicals, edibles and pressurised gases. There are five jetties for barges and seagoing vessels (draught up to 13.5 metres). Access is by sea, rail and road. Pipeline access is available. Tankage is insulated, coiled, coated, stainless steel and heatable. All chemical tanks are equipped with dedicated lines, pumps and loading racks for railcars and trucks. Prepump, blending, drumfilling and nitrogen blanketing are available.

FRANCE

Fos-sur-Mer: DPF, a company in which Van Ommeren has a share has one installation in France, at Fos-sur-Mer. The terminal has 40 tanks with a total capacity of 780,000 cubic metres. All mineral oils can be stored. There are five jetties for seagoing vessels (up to 72ft) and one for coastal vessels (21 ft). Access is by sea, rail, pipeline and road. Blending facilities are provided (MTBE, lead, butane).

GERMANY

Hamburg: The terminal has 300 tanks with a total capacity of 711,000 cubic metres for storing mineral oils, petrochemical liquid, liquid fertilisers, animal and vegetable oils and fats, and molasses. There are four jetties for sea-going vessels and barges (draught up to 44ft), seven berths for barges and coasters. Access is by road, rail and sea. Product lines are partly stainless steel. Tankage is insulated, coiled and coated, provided with steam and oil heating and partly equipped with nitrogen blanketing. Prepump facilities, drumfilling plant, blending and

Van Ommeren Tank Terminal at Botlek

dyeing facilities for gasoline and fuel oil and molasses are also available.

SPAIN

Barcelona: Located at the Port of Barcelona's Flammables Area, it has access by road, sea and in the near future, by railroad. Operates with 75 tanks ranging from 30 to 2,000 cubic metres, total capacity 35,000 cubic metres, equipped for practically any kind of chemical and petrochemical product. Drumming and warehouse facilities available. Suitable for transit operations and ship to ship transfers, using the free zone facilities.

UNITED KINGDOM

London: This terminal on the river Thames has 134 tanks with a total capacity of 348,000 cubic metres suitable for storage of clean low flash petroleum products and chemicals. Access is by sea (draught 36 ft), rail and road (bottom loading facilities).

VOTOB

Vereniging van Onafhankelijke Tankopslagbedrijven, Vlietweg 16, Leidschendam. Postal address: PO Box 443, 2260 AK Leidshendam, The Netherlands. Tel: **31 70 337 8750.** *Fax:* **31 70 320 3903.**

VOTOB embraces seven member companies in the Netherlands, active in the storage of liquid bulk commodities and products, including gases. Together the members offer 20 installations in the ports of Amsterdam, Dordrecht, Rotterdam and Flushing.

VOTOB is active in the interface with national government institutions and other associations with relevant adjacent interests.

VTG-Paktank Tanklager Hamburg GMBH

Brandsende 2-4 20095 Hamburg, Germany.
Tel: **(49) 40 32 58 43 0.** *Telex:* **2163506.** *Fax:* **(49) 40 32 26 30.**

Hohe Schaar (Hamburg): 427,000 cubic metres; sea, road, rail; 48ft; crude oils, petroleum products, chemicals.

Tollerort (Hamburg): 32,000 cubic metres; sea, road, rail; 29ft; petroleum products, chemicals, lubricating oils, latex, vegetable and animal oils and fats.

Kiel: 8,000 cubic metres; sea, road; 30ft; petroleum products.

VTG Vereinigte Tanklager und Transportmittel GMBH

Head Office: Neue Rabenstraße 21, D-20354 Hamburg, Germany.
Tel: **(49) 40 441 91 0.** *Fax:* **(49) 40 441 91 546.** *Telex:* **2170080 VT D.**

VTG, a member of the PREUSSAG Group, is one of the largest independent tank storage companies in Europe. VTG operates large modern tank installations at seaports and inland with a total capacity of around 4 million cubic metres. Storage facilities are complemented by 25,000 rail tank wagons, special purpose wagons and tank containers for the transport of petroleum products, chemicals, gases and bulk goods. An inland tank shipping service operates on all major European waterways.

Berlin: 225,000 cubic metres, 85 tanks ranging from 50 to 20,000 cubic metres for all petroleum products, solvents and petrochemicals; access for barges, road and rail tank cars and liner trains.

Cologne: 101,000 cubic metres, tank volumes range from 50 to 25,000 cubic metres.

Duisburg Ölinsel: 270,000 cubic metres, 212 tanks varying in size from 100 to 9,000 cubic metres. Insulated, coiled, coated and aluminium tanks are available and equipped with dedicated pipelines, heating, blending, nitrogen blanketing, vapour-return and dry air ventilation facilities. petroleum products, chemical and petrochemical liquids, liquefied gases and solvents. Distribution by road, rail, barge and pipeline.

Duisburg Parrallel-hafen: 38,000 cubic metres. Tank volumes 15 to 4,500 cubic metres for all petroleum products and chemicals. Access by tanktrucks and barges.

Ebrach: 5,000 cubic metres for storing petroleum products. 12 tanks.

Hanover: 320,000 cubic metres. 22 tanks ranging from 500 to 70,000 cubic metres for crude oil, petroleum products, chemicals and solvents. Access for road and rail tank cars, liner trains and barges; crude oil pipeline.

Hünxe: 900,000 cubic metres (568,000 for A1/332,000 for AIII) for storing petroleum products. 51 tanks ranging from 1,000 to 55,000 cubic metres. Access for road and rail tank cars, barges and pipeline.

Munich: 155,000 cubic metres, ranging from 30 to 45,000 cubic metres for storing petroleum products, chemical and petrochemical liquids and solvents. Blending facilities for gasoline are available. Access by railtank cars and tanktrucks.

Regensburg: 70,000 cubic metres, 60 tanks varying in size from 100 to 9,000 cubic metres. All petroleum products, chemical and petrochemical liquids and solvents. Heating, blending and mixing facilities. Distribution by road, rail and barge. Operation of the BP terminals.

Mainz-Gustavburg: 256,000 cubic metres, 33 tanks ranging from 8 to 40,000 cubic metres for all petroleum products, solvents and petrochemicals. Access by barge, road, rail tank cars, liner trains and pipeline (RMR).

Amsterdam: Comos Tank BV.

Düsseldorf: Omni Tank GmbH.

Hamburg: VTG-Paktank Hamburg GmbH.

Further details of these three companies are given under their separate headings.

Weser-Petrol Seehafentanklager GMBH & Co. KG.

Cuxhavener Str. 42/44, PO Box 106149, D-28061 Bremen, Germany.
Tel: **(49) 421 396 99-0.** *Fax:* **(49) 421 396 99-79.** *Telex:* **(41) 246 448 dsd.**

Weser-Petrol, part of the DIERSCH & SCHRÖDER group of companies, operates storage installations in Bremen and Nordenham at the river Weser with a total capacity of 180,000 cubic metres. These modern facilities offer every possibility for a comprehensive distribution system for mineral oil products, mainly middle-distillates and molasses. In addition Weser Petrol operates 50,000 cubic metres storage capacity for middle-distillates in Greifswald and Wismar on the Baltic Sea.

The International Federation of Inspection Agencies

Petroleum and Petrochemicals Committee

In today's competitive market the independent certification of both the quality and quantity of goods and products traded on international markets becomes increasingly important. Whether you are shipping umbrellas from India, rice from Thailand or petrochemicals from Teesside you want to know what you are paying for. Since the 1860s the independent inspection industry has provided such a service.

The International Federation of Inspection Agencies (IFIA) was founded in 1982 by the leading international inspection companies. Current membership is now close to 100 full and associate companies representing some 85 percent of the world inspection market. IFIA is therefore a truly international non-profit making organisation with the objective of reviewing and improving international methods and standards for the benefit of its members, and of industry.

IFIA consists of an elected Council, a London-based Secretariat and a number of Technical Committees. In addition to the Petroleum and Petrochemicals Committee, others cover a wide range of activities including Agricultural/Vegetable Oils, Environmental, Minerals, Industrial Goods, Consumer Products, Pre-Shipment Inspection and Legal. Recently an IFIA North American Committee has been set up to provide closer contact with members and clients in North and South America.

The IFIA Petroleum and Petrochemicals Committee includes senior representatives from Inspectorate, SGS, Inchcape Testing Services, Bureau Veritas, Cotecna, OMIC Europe and Saybolt. Graham Brett of Saybolt Int BV is the Chairman.

IFIA seeks to develop contact and information exchange between inspection agencies and allied businesses throughout the world in order to promote and coordinate technical and professional standards, methods and codes of practice. IFIA also represents the inspection industry in discussions with government authorities and trade associations.

During 1994 the Petroleum Committee concentrated on a number of key issues including the finalisation of the Petroleum and Petrochemical Guidelines, now published as part of the overall IFIA Guidelines. These guidelines seek to establish minimum standards for use by all IFIA members on a world-wide basis. They are nonetheless comprehensive covering all aspects of petroleum and petrochemical quality/quantity control and, in line with the dynamic nature of the oil industry, are annually reviewed in detail by the committee.

Representatives of the Petroleum Committee attended meetings in September 1994 and April 1995 of the IP Loss Control working group – PML 4(b) – at which a number of important issues, including cargo retention clauses and training, were freely debated. A closer working relationship with other industry committees such as the CCIA (part of EPCA) is currently being developed and the committee works closely with the IFIA North American Committee (NAC), particularly with reference to the proposed API Laboratory Accreditation programme.

The Petroleum Committee meets at regular intervals addressing a varied agenda on each occasion and would be pleased to discuss/debate any petroleum industry issues relating to inspection and testing. To do so please contact Graham Brett or Tony Holmes; any input from the oil industry would be welcome allowing rapid access at a senior management level to the majority of inspection agencies.

IFIA would welcome enquiries from inspection organisations seeking membership. Details can be obtained from: Tony Holmes, Secretary, IFIA, 22-23 Great Tower Street, London EC3R 5AQ.

Petroleum Measurement Paper No 7

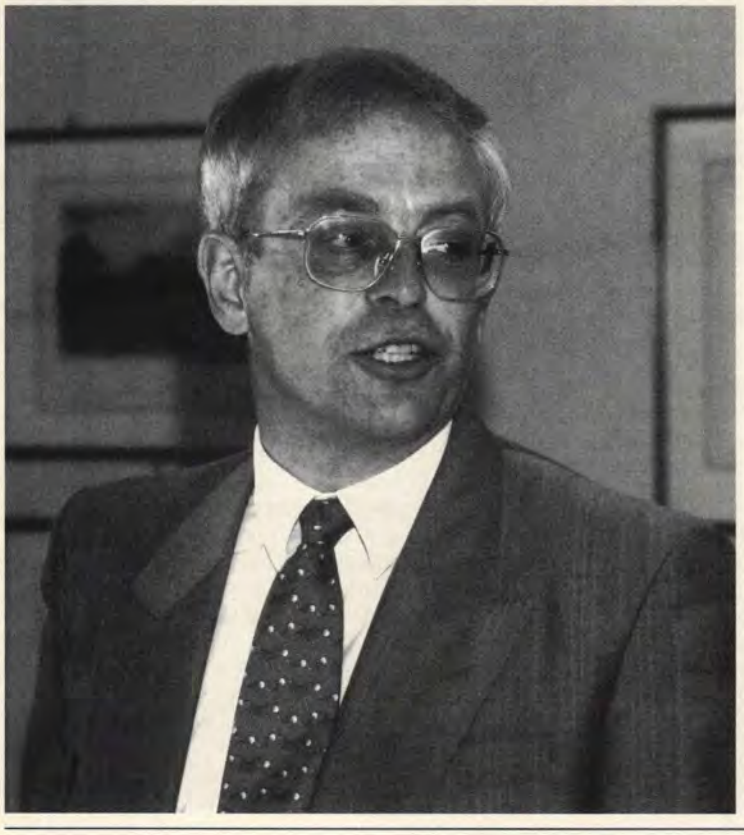
Guide to Recommended Measurement Practice for Compliance with the Requirements of HMCE Notice 179

By John Spargo, Excise Policy Group, HM Customs and Excise

Excise duty on mineral oil products is a traditional revenue raiser for the government – just how much of a revenue raiser can be gauged from the yield of £12.7 billion for the financial year 1993/94 which represented just under 9 percent of total government tax revenues.

Customs and Excise is the government department responsible for collecting excise duty on mineral oils. Liability to duty is assessed by refiners and warehousekeepers as product crosses a 'duty point'. Traders submit monthly duty returns to Customs and Excise with their payment. Excise duty rates are specific – that is to say they are expressed as a fixed amount per litre, as opposed to Value Added Tax which is paid as a percentage of the price paid for a product. As rates of excise duty are expressed as pence per litre, accurate measurement of product is essential if the correct amount of duty is to be paid. To assist revenue traders we publish our requirements for the measurement of mineral oil products for excise duty purposes in Notice 179 (*Mineral Oils: Duty and VAT: Warehousing and Related Procedures*). Traders must comply with the requirements of this Notice – that they are doing so is verified by Customs staff.

ITSA Chairman Roger Hartless addressing a recent association lunch. 'We have to recognise that regulatory authorities have certain criteria we have to meet', he told members, 'and our role is to meet them as effectively and efficiently as possible'.



Systems Based Control

Although the basic duty payment system has not changed, the method by which Customs gain assurance that all is well certainly has. Until relatively recently Customs officers were based permanently at refineries and major warehouses where product was measured for excise duty purposes. These officers adopted a 'hands-on' approach to ensure that duty was correctly accounted for. The requirements specified in Notice 179, and in other Notices in the 179 series, complemented this style of revenue control.

For example Notice 179M (*Flow Meters at Bonded Installations*) required that meters be approved by Customs and Excise before use for revenue accounting. That Notice also specified such things as accuracy requirements, proving frequencies, slip test requirements etc.

The traditional method of revenue control has now been replaced by an audit-based control method called Systems Based Control. This has seen the withdrawal of excise staff from traders' premises and the introduction of a control philosophy which emphasises a revenue trader's responsibility to pay the right amount of duty at the right time with Customs assurance being gained by selective audit of traders' commercial systems.

To support this change in control philosophy, and in line with the government's deregulation programme, we reviewed our policy on the measurement of mineral oil products for excise duty purposes. Our aim was to move away from specifying detailed measurement requirements such as the need for prior Customs approval of meters. Instead we wished to specify basic accuracy requirements for different forms of volumetric measurement and to allow revenue traders maximum freedom to determine how best to meet them.

Partnership approach

To complement these policy changes and to bridge any gap between our new simplified policy statement and the former Notice 179M, we felt that a document containing independent advice on recommended measurement practice should be available to the industry. We therefore approached the Institute of Petroleum to explore the possibility of the publication by the IP of such a document. The important difference between any such IP document and the Customs and Excise Notice it replaced would be that the IP document should contain *recommended* practice, whereas the Customs and Excise Notice contained *mandatory* requirements. The Institute responded posi-

IP Director General Ian Ward was guest speaker at the lunch. He singled out PMP7 as a prime example 'of how industry and government agencies can work together'.

tively to the suggestion. After much hard work Petroleum Measurement Paper 7 is the result.

To ensure that the paper would be acceptable to the oil industry as well as to Customs and Excise, it was drafted by a working group comprising representatives from the Institute of Petroleum, Customs & Excise, the Solvents Industry Association, the Independent Tank Storage Association and the United Kingdom Petroleum Industry Association.

Customs and Excise accuracy requirements are now published in a much more concise form in Notice 179 (*Mineral Oils: Duty and VAT: Warehousing and related procedures*). The former prescriptive Notice 179M has been cancelled and replaced by the recommended measurement practice contained in the new IP paper.

Success

Commenting on the new publication, Derek Brown, Chairman of the IP Petroleum Measurement Committee, said that it would be seen as a major step in introducing the new era of governmental deregulation, whereby technical guidance drafted by technical bodies is used as the basis against which the industry is monitored by the regulatory body.

In a letter to Ian Ward, IP Director General, Heather Massie, Assistant Secretary of the Excise Policy Group of Customs and Excise, said, 'I see the publication of this document as confirmation that the close working relationship traditionally enjoyed by our organisations in the field of petroleum measurement for excise duty purposes continues to flourish. Please pass on my thanks to everyone at the Institute involved in the drafting and publication of this most useful new document'.

Petroleum Measurement Paper No 7 Guide to Recommended Practice for Compliance with the Requirements of HM C& E Notice 179 is available from the Library, the Institute of Petroleum, 61 New Cavendish Street, London W1M 8AR. Price: £28 (£30 overseas)

Total takes the bait

By Colin Barraclough

When Total signed a $600 million agreement to develop Iranian oil and gas reserves at Sirri Island, the French major opened the door for other Western oil companies to participate in Iran's upstream oil development. Despite zealous US opposition to Western involvement in the Islamic republic's hydrocarbon sector, tenders covering 10 other oil and gas fields are set to attract widespread interest. Further contracts are likely to follow the 'buy-back' model but they offer important new reserves and a secured return over the medium-to-long term.

Only days after the Royal Dutch/Shell group pulled out from its negotiations with the National Iranian Oil Company (NIOC) over Sirri A and E fields, Total SA moved in to snap up the deal. Based on the aborted contract NIOC signed with Conoco (see *Petroleum Review*, April 1995), the Total deal involves extraction of oil and residual gas from the 500 million-barrel Sirri A and E fields offshore in the Gulf. With an estimated combined output of 120,000 barrels a day, the fields should ensure that Total recoups its investment within five years.

Iran's Oil Minister Gholamreza Aghazadeh said the contract was based on the buy-back principle where the contractor recoups his investment, plus an agreed reasonable return, through liftings of a proportion of the field's oil or gas output. In practice, the French company will invest $600 million in developing the Sirri fields in return for one-third of the eventual production.

Total had been talking to NIOC since 1990 but the Iranians were also involved in concurrent discussions with Shell about several development projects. These at first centred on the North Pars gas field but negotiations broke down in 1994 over a pricing disagreement. Shell switched instead to the Sirri fields, a move made more timely by the collapse of NIOC's negotiations with Conoco in March. Shell apparently tried to obtain easier terms than those in the Conoco deal but differences over pricing are again thought to have hampered the discussions. In the light of President Bill Clinton's embargo on Iran, Shell's estimate of the scheme's cost would have reflected the difficulty of getting vital equipment from non-US sources; NIOC stuck to a lower figure. In the face of tough Iranian negotiating, Shell withdrew, leaving the field clear for Total.

Yet the $600 million Sirri development will not be an easy ride. Part of the deal involves transporting 100 million cubic feet per day of generated gas for re-injection in Dubai's oilfields. Just days after Total announced its contract, the US government intervened to ask the UAE authorities not to accept Iranian gas for re-injection.

Little support for US ban

In May, President Clinton announced a ban on US companies dealing with Iran because of Tehran's alleged sponsorship of terrorism and its desire to acquire nuclear weapons. However, Washington has so far failed to persuade key European and Japanese allies to join the embargo. European governments are unhappy with the use of sanctions against a country such as Iran, believing they rarely work and may even encourage a re-emergence of hardline Islamic radicalism in Iran. Few believe Iran is quite as dangerous as Washington believes it is.

US officials have also harangued the French government in an effort to dissuade it from extending state-guaranteed credits to help finance the scheme. A State Department spokesman said on 14 July that Washington had a 'very deep disagreement' with France over the deal and said it sent the 'wrong kind of signal' to the Iranian government. On 19 July, however, the French Foreign Ministry rejected the American requests, saying the government had no legal means to block the contract. Total released a statement saying that financing would come from cash flow, loans and normal bank credits. Indeed, it

is unlikely that the company, France's second biggest oil group, would have signed the Iran deal without at least the tacit approval of French President Jacques Chirac.

UAE reaction

Furthermore, there is growing antagonism in the United Arab Emirates among private businessmen and government officials alike towards the hard-line American attitude on Iran. Despite Washington's embargo, private distributors in Dubai continue to send US-manufactured goods to Iran across the narrow Gulf straits. US pressure on the UAE government to reject Iranian gas will be a frustration but the oil output issue is so crucial to the federation's medium-term production capacity that the authorities are unlikely to bow to Washington's concerns.

Iranians pleased

In the meantime, the Iranian government can barely conceal its glee at the deal. State-owned Tehran Radio broadcast a triumphant interview with Mr Aghazadeh shortly after the deal's announcement in which he insisted that the Total contract would act as a model for 11 others planned with foreign companies. He said the agreement, the first of its kind with a foreign oil company since Iran's 1979 Islamic revolution, set 'a proper model for international contractors to carry out Iran's 11 other energy projects allowed for in the second five year plan (1995-2000).'

Iran is confident that Total's deal will pave the way for further crucial foreign investment into its oil sector. Foreign participation in Iran's offshore oil industry will be vital if the Islamic republic is to maintain its position as the world's second largest oil exporter after Saudi Arabia. Its existing oilfields are ageing and already require substantial gas re-injection to maintain reservoir pressure. Furthermore, its limited access to international financial markets has been aggravated by White House trade sanctions.

Further foreign investment?

NIOC has invited international contractors to visit Tehran in September to familiarise themselves with its other possible projects. The main offshore oilfields being offered to international oil companies are the two Dorood fields located at Iran's Kharg Island in the northern Gulf. NIOC managers aim to increase production at Dorood to 300,000 b/d by March 2000 from its present 160,000 b/d, while undeveloped fields at Sooroosh, Henjam and Khof could add at least 100,000 b/d of additional output. Construction of a gas gathering system and a second refinery at Bandar Abbas, plus expansion of a refinery on Lavan Island in the Gulf, will also be in the tender.

In the meantime, Shell has switched its negotiations with NIOC to the development of the South Pars gas and condensate field, Iran's largest offshore gas field.

Hazardous areas – six steps for dealing with potentially explosive atmospheres

By Graham Tortoishell, Principal Consultant, Sira Test and Certification Ltd

Any company which handles highly flammable materials or material which could form explosive atmospheres when mixed with air is required by law to take all reasonable precautions to prevent the creation, or failing that, the ignition of such atmospheres. If this is not possible, the company's management must ensure that the results of any explosion are controlled or contained to prevent any risk to people, animals and property. In the United Kingdom the law is defined by the Health & Safety at Work Act 1974, which outlines the obligations of the management but not the steps that may be taken to fulfil these obligations.

A six steps approach for assessing industrial situations involving potentially explosive atmospheres is recommended. These take into account a number of standards and regulations which can be used to establish the work procedures and safety philosophy which will ensure that the company's legal obligations are met.

Important references include the National Standards and Codes of Practice, eg. BS 5501 (an electrical equipment construction Standard) or BS 5345 (a Code of Practice for selection of apparatus, installations, inspection and maintenance). European equivalents of these are EN50 014 series and EN50 154 and there are also International Standards along the same lines, the IEC 79... series.

There are also industry-specific guidance documents such as the IP Codes of Safe Practice, particularly its Area Classification Code, and procedures or guidance documents produced by individual companies. The Health & Safety Executive in the United Kingdom also publishes guidance relating to specific activities such as paint spraying, or storage of flammable materials.

Whilst it is not possible to consider all the different methodologies available, a typical approach covers six key steps: containment, area classification, preventative measures, equipment criteria, documentation and maintenance.

1. Containment

Containment systems should minimise the possibility of release of flammables to atmosphere or into the work environment, taking into account the process requirements, the level of engineering practicable, and the hazardous material.

2. Area Classification

An area classification survey of the site will identify those areas in which flammable atmospheres could exist continuously or for long periods (Zone 0), from time to time in normal operations (Zone 1) or only as a result of some abnormal occurrence and persisting only for a short time (Zone 2).

3. Safety Measures

All sources of ignition must be eliminated from these classified hazardous areas. Fundamental measures include: the prohibition of smoking or naked flames; operating hot work permit systems and educating operators about impact and static as sources of ignition. All electrical equipment must be either tested and certified for use in potentially explosive atmospheres, or installed only on the basis of a justification for achieving an acceptable level of safety.

4. Equipment

The selection criteria for electrical equipment are determined by the nature of the zone and the concept of protection of the equipment (ie the means by which it is prevented from being a source of ignition). Other factors include the nature of the hazardous material and the maximum temperature that the piece of equipment might achieve.

Selection policy is a matter for individual companies or users but there is plenty of guidance in the National & International Codes of Practice mentioned earlier.

5. Documentation

The next step is to document the installation to such an extent that it can be demonstrated that all reasonable precautions have been taken. Typical information required would be:-

a. The classification of area in which each item of electrical equipment and any interconnecting cables are to be installed.

b. Details of the relevant standards and certificate numbers together with references for any item of certified equipment. For equipment which is not certified, details including type number, manufacture and the justification for its suitability in the area of use.

c. Reference to any special requirements listed in the certification documentations and the detailed methods by which such requirements are to be met in the particular installation.

d. The approximate physical location on the plant of each item of electrical equipment and the routing of any interconnecting cables.

e. The equipment group applicable to the flammable material present.

f. The surface temperature class applicable to the flammable material present.

g. Inspection check lists against which commissioning and routine inspections should be carried out.

h. Details of any electrical testings permitted or required as part of the commissioning and routine inspections.

i. A record of any modification to electrical equipment or systems together with the justification for each modification.

j. A record of the date of all inspections, maintenance operations and tests; details of any defects found and the actions taken to correct any such defects.

6. Inspection and maintenance

The final step is to inspect and then maintain the equipment within hazardous areas to ensure that it is in such a condition, throughout its working life, that it is incapable of igniting a potentially explosive atmosphere. Again, policy in this respect is a matter for individual companies but there are recommendations and guidance available in published documents.

While these six steps cover most situations involving potentially explosive atmospheres, it is not intended to be a comprehensive list of requirements.

Proposal for a Council Directive on minimum requirements to improve the safety and health protection of workers potentially at risk from explosive atmospheres

In this context 'explosive' is used, although the oil industry would have preferred the term 'flammable', since flammable atmospheres can exist without giving rise to an explosion when ignited.

This Directive, when completed and implemented, will have significant repercussions for those engaged in the petroleum industry. Oil companies are well aware of, and take appropriate precautions against, the hazards that may occur in numerous tasks involving the handling of petroleum liquids, vapours and gases. Nevertheless, incidents do continue to occur from time to time, often involving smaller operators.

According to this new Directive, employers will have to produce for each operation where potentially explosive atmospheres may exist an Explosion Protection Document or Plan. This will cover the design, construction, installation, commissioning and subsequent safe operation prior to any equipment being operated for the first time in such an area. A risk assessment analysis will have to be carried out for the development of the Plan.

As part of the process, the Directive will require employers to undertake a survey of areas in which potential or actual risk may be present. In other words, a hazardous area classification will become a standard feature of any site where petroleum is handled or stored.

PEOPLE

Mr Edward Blair, the former President of Hamilton Oil Company (now BHP Petroleum Ltd), has been awarded an Honorary CBE by Her Majesty the Queen, for his outstanding services to the oil and gas industry in the United Kingdom. The Right Honourable Ian Lang MP, President of the Board of Trade and Secretary of State for Trade and Industry, presented the honour to Mr Blair, who is a citizen of the United States of America, at a ceremony at Admiralty House.

Autronica Offshore AS has appointed **Jon Hind** as UK Manager for the company's range of offshore fire detection systems, given the task of with sspearheading development of the UK offshore and petro-chemical markets. He will be based at the company's offices at Watford.

Jon Ashdown has joined the Seismic Technology Division of the Scott Pickford Group Ltd as Head of Project Development. He was previously Technical Services Manager with Simon Petroleum Technology. **Steve Holman** formerly with Simon Petroleum Technology as well, has been appointed Data Processing Supervisor.

European computing services company CMG has further strengthened its oil industry team by promoting *Mark Mortimer* to associate director. Mr Mortimer joined CMG as a management consultant specialising in change management. He will focus on consultancy and project management within the oil industry.

Harold Shaub, Vice President of Technology, Petrolon Technologies Division of Slick 50 Corp, has been chosen to receive a 1995 Award of Merit from ASTM. The title of Fellow accompanies the award.

Mr Ed Gallagher, Chief Executive of the National Rivers Authority, is to be appointed to the post of Chief Executive of the new Environment Agency for England and Wales. He will head a new, 9,000 strong organisation which will assume, from 1 April 1996, the present roles and responsibilities of the NRA, Her Majesty's Inspectorate of Pollution (HMIP) and the Waste Regulatory Authorities in England and Wales.

Loren K Carroll, president and chief executive officer of M-1 Drilling Fluids LLC, has announced that *Bryon W Barton* will become vice president of a new business unit specialising in wholesale and industrial products. The marketing and distribution of these products will be under the existing Federal label.

The Falkland Islands government has announced the appointment of **Dr AJ Martin** as Administrator Oil Licensing Team. He has nearly 40 years experience in the oil and gas exploration industry with over 27 years service with British Petroleum retiring as General Manager Exploration and latterly as a managing director of Clyde Petroleum, which he retired from in 1994.

JKX Oil & Gas has appointed *Mr Robert Horton* (above) non-executive chairman. Mr David Boyd CBE has also joined the company as a non-executive director. Mr Horton is also chairman of Railtrack plc. From March 1990 to June 1992 he was chairman and chief executive officer of British Petroleum. He has spent most of his career in the oil industry and was elected to the BP Board in 1983 as a managing director, responsible for finance, planning and the Western Hemisphere and became deputy chairman in March 1989.

Charles Smith CBE, who recently retired as managing director of Chevron UK, is to become non-executive chairman of Dana Exploration. It is the first directorship Mr Smith has accepted since he retired from Chevron earlier this year. He was also President of the Institute of Petroleum from 1992 to 1994.

Arco British Ltd (ABL) has appointed **Lawrence Aldridge** Contracts and Procurement and Materials Manager. Most recently he held the position of Business Manager for ABL's Project group, having previously been Contracts Manager for ARCO Indonesia.

David McKenzie has been appointed chief executive of MTD, the Marine Technology Directorate Ltd. He comes from BP where he held a succession of key posts in some of the world's major oil areas over a period of 20 years.

J Kent Murray, president of Chevron Research and Technology Company (CRTC), retired on 1 July 1995 after a 39-year career, in management positions of the company's US refineries. Succeeding him is **Bruce D Frolich**, currently Vice-President of refining for Chevron USA Products Company. His position will be assumed by **Lance A Gyorfi,** Vice-President and General Manager, Operations, of Chevron Shipping Company.

Sue Powell has been appointed senior PR and media officer at Lloyd's Register. She will be responsible for day-to-day corporate public relations with the additional brief to develop the media profile of LR's Engineering Services and Industrial Division.

Calvin E Willoughby has been appointed to the Board of Directors of CBI Industries Inc. He has also been elected an Executive Vice President of CBI and President of Liquid Carbonic Industries Corporation, one of CBI's major operating segments.

***Richard Ballantyne*, district manager of Sun Oil Britain (SOBL) has joined the company's board. Aberdeen-based Mr Ballantyne has spent 17 years in the energy sector and has been with the UK arm of American oil company Sun since 1985. He is also chairman of the joint management team for the SOBL/Brown and Root operations alliance, which now operates the North Sea Balmoral field.**

Halogen handlamp for hazardous areas

A new explosion-protected portable halogen handlamp is now available from ABB Control of Coventry for use in hazardous areas. The HE8 Euro is the standard model in the Ex handlamp range, and features an extremely bright halogen double bulb which maximises useful light output.

Other features include scratch-resistant mineral safety glass and a focusing ring to change the beam from flood to spot. It is suitable for inspection, maintenance and security patrol use at offshore and onshore oil, gas and petrochemical sites. It is powered by three alkaline cells and has a duration of approximately 10 hours. An optional rechargeable NiCd battery pack with electronic battery life indication is available, as well as a plug-in charger.

Harold and his halogen handlamp

BMW 318 with David Brabham at the helm

New size packs for high performance engine oil

Fina's fully synthetic high performance engine oil, Fina First 5w/40 is now available in 20 litre drums and 210 litre barrels. The oil meets the stringent API SH specification and carries approvals from BMW, VW, Mercedes Benz and Rover.

Monitor Lite gets to the root of the problems

Cegelec Projects has launched the Overpower Monitor Lite. The tool allows you to gather, store, structure, analyse and present information on your plant's activities. It claims to record in fine detail any group of analogue, pulse train and digital signals you choose and continue to maintain the record for as long as it takes to diagnose the problem.

The data is organised by time and can be displayed in full colour graphics. This can be done while the monitor is still recording.

In addition to the data logging and trigger options, there are pre trigger buffer, mains free and high voltage input facilities.

It also has a powerful maths analysis capabilities and can be set up in places where access is awkward or restricted, yet the information can be safely stored and readily analysed.

Overpower Monitor Lite

System designed to overcome problems of UIC

System 2000, a flexible, closed-cell insulation and pipe protection system manufactured by nmc (UK) Ltd, is designed to overcome problems historically associated with Under Insulation Corrosion (UIC).

It is a resilient, elastomeric insulation, encapsulated in a flexible, tough coating and provides an integral barrier to water vapour and moisture ingress, thereby offering long-term, effective corrosion protection.

Lightweight, dust and fibre-free, and installer friendly as it does not require specialised protective equipment or clothing.

The total system is flexible and can tolerate thermal and mechanical movement.

It also offers consistent thermal efficiency and good accoustic performance in the one insulation system. It has oil, chemical, weather and tear resistance and provides long-term durability together with low maintenance.

It can be used on all mechanical services in the temperature range -40°C to 116°C and is colour coded for easy identification of services.

Water analyser to measure hydrocarbons

A portable analyser able to measure in situ ppm levels of petroleum hydrocarbons over a very wide range (up to 20,000 ppm) in vapour and water is now available in the United Kingdom. Petrosense PHA-100 combines FOCS technology with digital electronics and an advanced microprocessor to bring to field measurement levels of accuracy only surpassed by gas chromatography. It can detect petroleum hydrocarbons directly in groundwater, in vapour and in floating liquid product.

Plastic gland approval

Elkay Electrical has introduced the Index EExe, the first plastic cable gland to receive European C Generation approval for use on electrical equipment in potentially explosive areas of higher safety class 'e'; in particular the chemical and onshore and offshore oil and gas industries. It has been certified by the ISSeP Institute in Belgium and is the first plastic gland to have been fully apparatus certified to the European standards EN50014 and EN50019.

It has no restrictions of use on fixed installations within Europe and its certification is recognised in Scandanavia also.

Other advantages include the weight saving against metal glands on a ratio of up to 8:1. It costs less than a brass gland, can withstand an impact of 7Nm at a temperature of -25° centigrade, has a high resistance to ultra-violet light and can be installed with all cables using standard tools, without any risk of cracking due to reactive thread forces.

Plastic cable gland

Automated moisture meter

Anachem have announced a new development for the Karl Fischer moisture meter. Model VA 6SC has been designed to simplify and speed up batch testing of samples. It allows unattended, consecutive analysis of up to 24 separate samples. The vapouriser is compatible with existing CA06/VA06 systems.

Portable OES analyser

A portable alloy analyser based on optical emission spectroscopy (OES) has been developed by Metorex Internation Oy. Designated ARC-MET 930, the new instrument is claimed to be the world's smallest OES-analyser having a weight of only 14.5 kilograms.
It comprises a central unit and a probe, which is connected to the console by a cable thus allowing the user ample freedom to move around while measuring. The analyser is designed for operation in demanding environments. It is splash-proof, and sustains major variations in temperature and humidity.

Portable optical emission analyser claimed to be the world's smallest

Product sampler insensitive to pipeline pressure

Jiskoot Process control engineers have introduced a new product sampler designed to sample all non-corrosive liquids between the ranges of 0.5 to 500cS. including light crudes.

The RD7007 is a positive displacement sampler which is insensitive to pipeline pressure. Its design allows the sampler to generate high outlet pressures enabling it to collect samples at pressures from atmospheric to maximum process conditions of 19 bar.

The sampler uses a continuous running electric motor coupled to the sample actuator with a clutch which is operated by a solenoid coil. The coil, which is an industry standard, has a manual override to permit individual or free running sampling. It has a grab size of 1 ml. with a sample capture frequency between 15/18 grabs per minute at 50/60 Hz AC power. It is designed to fit pipelines from 3" to 8". It is certified CENELEC or UL explosion-proof.

RD7007 designed to sample non-corrosive liquids

Adhesive labels that make their mark

As new legislation is introduced, new requirements within the working environment are imposed. Almost anything that is electrical or moves nowadays has to be labelled and logged. The labels themselves have to represent a permanent record without loss of detail and quality and in some cases prevented from being moved.

The Gravofoil by Gravograph is a new product that will satisfy health & safety marking requirements. It is a thin totally flexible PVC based plastic sheet that will take any shape, whether it is convex, concave or sharp square edges, be cut to any size or shape, adheres permanently to any smooth surface, fire resistant to 100°C and resistant to mild acids and alkalis. It comes automatically adhesive backed, can be used externally and can be cut with a pair of scissors or even punched into shape by any machine.

The required record is engraved on the plastic sheet before it is applied. The engraving is carried out on a small portable engraving machine which can be taken on site.

New standard for covering systems

Fibrelite Composites Ltd have introduced a new range of Forecourt Tank and Access Covering Systems to conform with the new European Standard EN124. Their system has been tested and approved by an independent third party BSI.

European standard tank cover

Offshore safe load indicator

Wylie System's new WW650 modular Offshore crane safe load indicator, provides a system which utilises the latest digital signal processing (DSP) techniques to increase the indicator's capabilities, both in terms of capacity and speed of operation.

By using this new technology the system can produce, when required, full data recording and condition monitoring of the crane. For ease of access to the stored information, the data module can be removed from the indicator and then downloaded to a computer which is located away from the crane.

It has been designed as a modular construction which enables the specification to be varied to suit each customer's requirement. Suitable for use in areas where zone 1, or zone 2 protection is required, the WW650 is able to meet all the requirements of marine crane manufacturers, government safety organisations and leading certification authorities.

Wylie Systems new WW650 Offshore safe load indicator

Precision-adjustable pressure relief valve

Parker Hannifin has announced a new 0-225PSIG pressure relief valve for process instrumentation applications, enabling instrumentation system designers to meet specific application needs with new levels of precision. A graduated selection of release springs, coupled with low-friction coating on the valve travel path, give fine control over cracking pressure. This arrangement provides a simple means of putting highly reliable safety, environmental and/or equipment protection into place for a wide variety of process and laboratory instrument applications.

The Parker RL4 is constructed using 316 stainless steel with a 1/4 inch flow port which can either duct media to a safe place, or release over-pressures to atmosphere. Five selections of release spring allow sensitive adjustment of cracking pressure over 0-25, 25-50, 50-100, 100-150 or 150-225 PSIG ranges. Each spring is colour coded for convenience and maintenance efficiency, and provided with a label for the valve body for at-a-glance advice of rating. Fine adjustment is acheived by means of an external nut, which can be secured in position by a locking nut and lock wire once the cracking pressure is determined.

To further enhance the performance and accuracy of the valve's operation during cracking and resealing, Parker applies a very low-friction synergistic coating to the internal body bonnet. This provides a smooth path for valve travel and, additionally, helps assure the valve's completely linear margin between cracking

Breakthrough in field joint infill

Floatec Corporation has announced a breakthrough in field joint infill. The company working with the research facilities of Foam Enterprises Inc., has developed an aggregate filled, polymer concrete composite infill system, The new patented system. designated FJ-4000, is claimed to combine the fast cycle times of conventional polyurethane field joints with the strength which can only be obtained from a composite system utilising aggregate. The system was designed to meet the stringent standards required in the North Sea, as incorporated in the Shell Hammer Test. It has been certified by CAPCIS.

New fire detector range

Apollo Fire Detectors Ltd has launched a new range of intrinsically safe fire monitors for use in hazardous industrial environments.

Typical applications for the new range include offshore oil and gas rigs, onshore petrochem refineries and any chemical process plant where potentially explosive environments exist. The new IS XP95 range includes ionisation and optical smoke monitors and a heat monitor. Also included are a compatible mounting base and manual call point, as well as a special protocol translator.

The range is BASEEFA certified to E Ex ia IIC T5, and fully complies with the latest European intrinsic safety requirements.

The new IS XP95 range

CONTACTS

ABB Control Ltd	01203 368500
Fina plc	01372 726226
Cegelec Projects	01788 563563
NMC (UK) Ltd	01388 767991
Geotechnical Instruments	01926 338111
Elkay Electrical Ltd	01686 627000
Anachem	01582 456666
Metorex International Oy	00 358 421 451
Jiskoot Autocontrol Ltd	01892 518000
Gravograph Ltd	0171 476 5861
Fibrelite Composites Ltd	01756 799773
Wylie Systems	01424 421235
Parker Hannifin plc	01271 22591
Floatec Corporation	0181 995 7494
Apollo Fire Detectors	01705 492412

FORTHCOMING EVENTS

August

23rd-25th
Vienna: '9th Congress & Exposition Gas Turbines in Cogeneration & Utility, Industrial and Independent Power Generation'. Details: International Gas Turbine Institute, The American Society of Mechanical Engineers, 5801 Peachtree Dunwoody Road, Suite 100, Atlanta, Georgia 30342-1503, USA.
Tel: 404 847 0072
Fax: 404 847 0151/843 2517

September

4th
London: 'High Strength Steels in Offshore Engineering'. Details: Jim Grant, MTD, 19 Buckingham Street, London, WC2N 6EF.
Tel: 0171 321 0674
Fax: 0171 930 4323

5th-8th
Aberdeen: 'Offshore Europe '95'. Details: Offshore Europe Partnership, Rowe House, 55/59 Fife Road, Kingston-upon-Thames, Surrey KT1 1TA.
Tel: 0181 549 5831
Fax: 0181 541 5057/5016/547 2807
Telex: 8954102

6th-8th
Mexico: 'Coastal '95; Computer Modelling of Seas and Coastal Regions'. Details: Liz Johnstone, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA UK.
Tel: 44 0 1703 293223
Fax: 44 0 1703 292853
EMail: CMI@uk.ac.rl.ib
Intl EMail: CMI@ib.rl.ac.uk.

7th
London: 'Venezuela Seminar'. Details: Petroleum Exploration Society of Great Britain.
Tel: 0171 495 6800/5800
Fax: 0171 495 7808

10th-13th
Nice: '1995 AAPG International Meeting'. Details: AAPG International Conference, PO Box 979, Tulsa OK 74101-0979 USA.
Tel: 1 918 584 2555
Fax: 1 918 584 2274

11th-13th
Cambridge: 'Oil and Gas Transportation Workshop'. Details: Langham Oil Conferences Ltd, 37 Main Street, Queniborough, Leicester LE7 3DB.
Tel: 01509 881022
Fax: 01509 881576

11th-13th
Aberdeen: 'Loss Prevention in the Oil and Gas Industry'. Details: Ms Catherine Cox, BHR Group Ltd, Cranfield, Bedford MK43 0AJ.
Tel: 01234 750422
Fax: 01234 750074

11th-14th
Belgium: '2nd International Conference on Pipeline Technology'. Details: Pipeline Technology Conference: Desguinlei 214, B-2018 Antwerpen, Belgium.
Tel: 32 3 216 0996
Fax: 32 3 216 0689

11th-15th
Dundee: 'UK Oil & Gas Law'. Details: Ms Moira McKinlay, Summer Programme Registrations, Centre for Petroleum and Mineral Law and Policy, University of Dundee, Dundee DD1 4HN, Scotland.
Tel:01382 344303/344300
Fax: 01382 322578

12th-14th
Vienna: 'International Energy Markets'. Details: Euroforum Deutschland GmbH, Postfach 23 02 65, D-40088, Düsseldorf, Germany.
Tel: 49 211 96 86 586
Fax: 49 211 96 86 502

12th-14th
Houston: '5th Pipeline Reliability Conference: Risk Management, Cost Benefit Analysis'. Details: Gulf Publishing Company, PO Box 2608, Houston, Texas 77252-2608 USA.
Tel: 800 231 6275
Fax: 713 520 4438

13th
London:'Farmin/Farmout'. Details: Petroleum Exploration Society of Great Britain.
Tel: 0171 495 6800/5800
Fax: 0171 495 7808

13th-15th
Singapore: 'The 2nd Annual Asia Pacific Lubricants Conference'. Details: 140 Robinson Road, #06-01 Chow House, Singapore 0106.
Tel: 65 227 6772
Fax: 65 222 6869

14th
London: 'Coalbed Methane in the UK'. Details: Lorraine Gettings, The Institute of Energy, 165-189 Railway Terrace, Rugby.
Tel: 01788 578214
Fax: 01788 577182

14th-15th
Cambridge: 'Oil and Gas Field Utilisation'. Details: Langham Oil Conferences Ltd, 37 Main Street, Queniborough, Leicester LE7 3DB.
Tel: 01509 881022
Fax: 01509 881576

18th-19th
London: 'The Commercial Implications of the new UK Network Code'. Details: SMi Ltd, 2nd Floor, 45 Curlew Street, Butlers Wharf, London SE1 2ND.
Tel: 0171 417 7790
Fax: 0171 417 7791

19th
London: 'Making Profits and Not Losing Money by Dealing with Contaminated Land'. Details: Henry Stewart Conference Studies, Russell House, 28/30 Little Russell Street, London WC1A 2HN.
Tel: 0171 404 3040
Fax: 0171 404 2081

19th-20th
Norway: 'The 7th Conference on the European Downstream Industries in a Changing Environment'. Details: Norwegian Petroleum Society, PO Box 1897, Vika, N-0124 Oslo, Norway.
Tel: 47 22 43 00 50
Fax: 47 22 55 46 30

21st-22nd
New York: 'Advanced Pricing & Trading Standards for Competitive Energy Risk Management'. Details: AIC Conferences, 50 Broad Street, 19th Floor, New York, NY 10004 USA.
Tel: 212 952 1899
Fax: 212 248 7374

24th-28th
Abu Dhabi: 'The Middle East Gas Summit 1995'. Details: IBC Gulf Conferences, Rais Hassan Saadi Building, PO Box 15078, Dubai, UAE.
Tel: 9714 552 500
Fax: 9714 527 455

25th-26th
Birmingham: 'APEA '95 Conference and Exhibition'. Details: Dave Bucknall.
Tel: 01472 341344
Fax: 01472 240529

25th-26th
Rotterdam: 'Terminal Operation and Static Measurement'. Details: Abacus International, 214 Inchbonnie Road, South Woodham Ferrers, Essex CM3 5WU.
Tel: 01245 328340
Fax: 01245 323429

25th-28th
Bedford: 'Pumps and the Plant Design Engineer'. Details: The Short Course Administrator, Department of Fluid Engineering & Instrumentation, School of Mechanical Engineering, Cranfield University, Bedford MK43 0AL.
Tel: 01234 754766
Fax: 01234 750728
Telex: 825072 CRANUN G

FORTHCOMING EVENTS

26th-27th
London: 'Preventing and Managing Emergencies'. Details: Sarah Ashmore, Gilmoora House, 57-61 Mortimer Street, London W1N 7TD.
Tel: 0171 637 4383
Fax: 0171 631 3214

26th-27th
London: 'The Jack-Up Platform: Design, Construction & Operation'. Details: The Secretary, Ocean Engineering Research Centre, City University, London.
Tel: 0171 477 8140
Fax: 0171 477 8570

26th-28th
Warsaw: 'Stacja Benzynowa'. Details: Sylvia Leeman, Expoconsult B.V., Industreweg 54, PO Box 200, 3600 AE Maarssen, The Netherlands.
Tel: 31 3465 73777
Fax: 31 3465 73811

27th
Aberdeen: 'The Impact of CRINE and Goal Setting Legislation on the Design of Offshore Safety Systems'. Details: Karen Whines, The Institute of Measurement and Control, 87 Gower Street, London, WC1E 6AA.
Tel: 0171 387 4949
Fax: 0171 388 8431

27th-28th
Rotterdam: 'Flow Metering and Meter Proving'. Details: Abacus International, 214 Inchbonnie Road, South Woodham Ferrers, Essex CM3 5WU.
Tel: 01245 328340
Fax: 01245 323429

October

2nd-3rd
Kazakhstan: 'KIOGE '95 Projects Conference'. Details: International Trade and Exhibitions J/V Ltd, Byron House, 112a Shirland Road, London W9 2EQ, UK
Tel: 0171 286 9720
Fax: 0171 286 0177
Telex: 896217

2nd-4th
The Hague: '1st International Underbalanced Drilling Conference & Exhibition'. Details: Holland Organising Centre, Parkstraat 29, 2514 JD, The Hague, The Netherlands.
Tel: 31 70 3657850
Fax: 31 70 3614846

4th
Aberdeen: 'Advances in Subsea Production and Downhole Equipment'. Details: Subsea Engineering News, 2 Marlborough Street, Faringdon, Oxon, SN7 7JP.
Tel: 01367 242525
Fax: 01367 241125

4th
London: 'Energy Efficiency in the Refining and Petrochemicals Industries - The Future'. Details: Caroline Little, The Institute of Petroleum.

5th-6th
London: 'Blending of Petroleum Products Training Course'. Details: SGS Redwood (UK) Ltd, Cornwall House, London Road, Purfleet, Essex RM19 1PA.
Tel: 01708 866855
Fax: 01708 868994
Telex: 25838

10th-12th
London: 'Trading LPG and Chemical Gases Training Course'. Details: SGS Redwood (UK) Ltd, Cornwall House, London Road, Purfleet, Essex RM 19 1PA.
Tel: 01708 866855
Fax: 01798 868994
Telex: 25838

11th-13th
Aberdeen: 'FPSO World Congress and Technology Exhibition'. Details: Jim Morgan, Aberdeen Operations, The OCS Technology Group, The Innovation Centre, Aberdeen Offshore Technology Park, Exploration Drive, Bridge of Don, Aberdeen AB23 8GX.
Fax: 01224 708080

16th-17th
London: 'Trading in the new UK & European Spot & Future Gas Markets'. Details: SMi Ltd, 2nd Floor, 45 Curlew Street, Butlers Wharf, London SE1 2ND.
Tel: 0171 417 7790
Fax: 0171 417 7791

16th-19th
Harrogate: 'Fire '95'. Details: Fire '95 Conference Office, 10/11 Pebble Close, Tamworth, B77 4RD.
Tel: 01827 68866
Fax: 01827 61530

18th
London: 'Biodegradable Petroleum Products and the Environment Conference'. Details: Caroline Little, The Institute of Petroleum.

18th-19th
Aberdeen: 'Heavy Oils – Recovery, Processing & Transportation'. Details: Owain Jenkins, International Conference Group, Suite C, Ground Floor, Long Island House, 1-4 Warple Way, London W3 0RG.
Tel: 0181 743 8787
Fax: 0181 740 1717

18th-19th
Vienna: 'Commercial Developments of the Energy Sector in Central & Eastern Europe'. Details: Conference Division, 11-13 Charterhouse Buildings, London EC1M 7AN.
Tel: 0171 490 3774
Fax: 0171 490 8932

18th-19th
Aberdeen: 'Latest Technology for cost-effective Offshore Pipeline Design, Construction & Operation'. Details: IIR Ltd, 6th Floor, 29 Bressenden Place, London SW1E 5DR.
Tel: 0171 915 5055
Fax: 0171 915 5056

22nd-25th
Dallas: 'Society of Petroleum Engineers Annual Technical Conference & Exhibition'. Details: SPE, PO Box 833836, Richardson TX 75083 USA.
Fax: 214 952 9328

26th-27th
London: 'Natural Gas: Trade and Investment Opportunities in Russia and the CIS'. Details: RIIA Conference Unit, 10 St James's Square, London, SW1Y 4LE.
Tel: 0171 957 5700
Fax: 0171 957 5710

INSTITUTE NEWS

NEW MEMBERS

Mr S J Ballard, 37 Morningfield Road, Aberdeen AB2 4AP.
Mr S Barnard, Dow Jones Telerate Ltd, Winchmore House, 15 Fetter Lane, London EC4A 1BR.
Mr W J Beardall, Jardine Insurance Brokers, Jardine House, 6 Crutched Friars, London EC3N 2HT.
Mr G Brooks, Interstates International Ltd, Fourth Floor, Allen House, Maltings, Sawbridgeworth, Herts.
Mr C Callow, Keith Bayley Rogers & Co, Ebbark House, 93-95 Borough High Street, London SE1 1NL.
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Mr F R Gugen, Amerada Hess Ltd, 33 Grosvenor Place, London SW1X 7HY.
Mr G M Gwynne, Garden Flat, 28 Durand Gardens, London SW9 0PP.
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Mr I D Haylock, Christiania Bank, Lloyds Chambers, 6th Floor, 1 Portsoken Street, London E1 8RU.
Mr B Healey, 6 Whitelea Crescent, Balerno, Edinburgh EH14 7HF.
Mr C A Hett, Railway Cottage, 50 Peachfield Road, Malvern Wells, Worcs WR14 4AL.
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Mrs D Labas, Ina-Trgovina, V.Holjevca 10, 41000 Zagreb Croatia.
Mr V Lee, 239 Toa Payoh Lor 1, #21-90 1231 Singapore.
Mr J R Mather, Andersen Consulting, 2 Arundel Street, London WC2R 3LT.
Mr M R McCann, Gas & Equipment Pte Ltd, 74 Kian Teck Road, Jurong Industrial Estate 2262 Singapore.
Mr B S McCombie, Interstates International Ltd. Fourth Floor, Allen House, Maltings, Sawbridgeworth, Herts.
Dr S McKelvie, METOC plc, Hamilton House, Kings Road, Haslemere, Surrey GU27 2QA.
Mr S Mogridge, The Garage, Easter Compton, Samson House, Berwick Lane, Hallen, Bristol BS10 7RS.
Mr J A Naish, Nishiazabu Park Towers, E202 4-17-31 Nishi Azabu Minato Ku Tokyo 106 Japan
Mr P A Ohanian, 44 Hillfield Road, London, NW6 1PZ.
Mr M Parkes, 12 Passalene Lane, Wavendon Gate, Milton Keynes MK7 7RF.
Dr J D Shorey, Safety Consultancy Services, Ambleside House, Covenham St Mary, Louth, Lincs LN11 0PG.
Mr D D Skeels, British Gas Explo & Production, 100 Thames Valley Park Drive, Reading, Berks RG6 1PT.
Mr M J Smith, 13 Knighton Close, Woodford Green, Essex IG8 0NU.
Mr C Swadkin, 65 Coleraine Road, Blackheath, London SE3 7PF.
Mr P R Trimmer, BP Oil International Limited, Britannic House, 1 Finsbury Circus, London EC2M 7BA.
Mr A E Weeresinghe, Colag Inspection Services (Pvt) Ltd, 300-304 Galle Road, Colombo 03 Sri Lanka.
Mr M J Whelan, Aran Energy Exploration Ltd, 37 Maddox Street, London W1R 9LD.
Mr I R Williams, 7 Tate Road, Richmond, North Yorkshire DL10 4TY.
Miss M Wold, Dow Jones Telerate Ltd, Winchmore House, 15 Fetter Lane, London EC4A 1BR.
Mr R A Yearley, Gulf Oil Refining Limited, Waterston Refinery, Milford Haven, Dyfed SA73 1DR.

STUDENTS

Mr F I Ajikobi, Imperial College, Prince Consort Road, London SW7 2BP.
Mr A Al-Sayed, P O Box 96289, Doha, Qatar.
Mr D Bradley, The Glen, Frogham, Fordingbridge, Hants, SP6 2HS.
Miss G I Jacks, 38B Lampard Grove, Stamford Hill, London, N16 6XQ.
Mr A Sillence, LSU College of Higher Education, The Avenue, Southampton SO17 1BG.

NEW FELLOWS

Mr Roland C Shaw CBE
An economist by training (Princeton and the London School of Economics) Roland Shaw first worked for the US State Department before joining the oil industry in 1955. He came to London from Dallas in the 1960s. A colourful extrovert, he founded Premier Consolidated Oilfields plc, became a Director in 1971, Managing Director in 1977 and Chairman in 1978. He finally stepped down as non-executive Chairman last year but remains Chairman of Heritage Oil and Gas. He founded BRINDEX, the Association of British Independent Exploration Companies, in 1974 and has subsequently served on its executive, in some years as Chairman. He has also been a member of the Council of UKOOA. In 1985 he was presented with a CBE (Hon) for services to tbe British oil industry.

Dr J W Laxton
Dr Laxton was awarded a PhD by the University of London. From 1954-60 he worked as a Research Officer for D Napier & Son Limited. His main work was the development of catalysts for the HTP/kerosine hot Scorpion rocket motor intended for the PI Lightning supersonic fighter. He also investigated the risk of the vapour phase explosions in under-belly exposed fuel tanks attached to supersonic aircraft. In 1960 he joined the Central Electricty Research Laboratories at Leatherhead and became an acknowledged authority on fireside aspects of the burning of residual fuel oil, from combustion, corrosion to emissions. In 1989 he joined Inchcape Testing Services, Caleb Brett, as Technical Consultant. He currently advises FIA, FI and FIM on fuel related topics. In 1977 Dr Laxton was awarded the Esso Royal Society Medal for 'Achievements in Energy Conservation' for research into the prevention of corrosion in power stations.

UK Deliveries into Consumption (tonnes)

Products	*†May 1994*	**May 1995*	*†Jan-May 1994*	**Jan-May 1995*	*% Change*
Naphtha/LDF	210,609	213,465	1,241,352	1,331,720	7
ATF – Kerosene	644,993	669,093	2,746,467	2,810,311	2
Petrol	1,910,092	1,859,711	9,264,161	8,841,660	-5
of which unleaded	1,082,646	1,152,340	5,197,539	5,417,983	4
of which Super unleaded	121,205	85,323	576,777	408,723	-29
Premium unleaded	961,441	1,067,017	4,620,762	5,009,260	8
Burning Oil	114,357	167,158	1,378,704	1,342,151	-3
Derv Fuel	1,037,497	1,133,415	5,089,799	5,418,644	6
Gas/Diesel Oil	561,610	559,890	3,341,030	3,210,418	-4
Fuel Oil	837,563	570,785	4,230,263	3,636,832	-14
Lubricating Oil	67,822	79,292	324,352	369,935	14
Other Products	696,086	765,701	3,368,166	3,693,005	10
Total above	**6,080,629**	**6,018,510**	**30,984,294**	**30,654,676**	**-1**
Refinery Consumption	549,901	497,408	2,634,897	2,591,929	-2
Total all products	**6,630,530**	**6,515,918**	**33,619,191**	**33,246,605**	**-1**

*† Revised with adjustments *preliminary*

Mr M V Gauntlett
Mr Gauntlett is Chairman and Chief Executive of Proteus Petroleum, a company he founded in 1988. He has been in the industry since the early 1960s, initially with BP then CFP/Total, before founding Pace Petroleum in 1972. In addition Mr Gauntlett was Chairman of Aston Martin Lagonda from 1981-91.

Mr I W Gareth Hughes
Mr Gareth Hughes has worked in the upstream side of the industry for 40 years in the Netherlands, Nigeria, Venezuela, Qatar, Somalia and Great Britain. After holding various posts with a number of oil companies he was Director of Petroleum Engineering at the UK Department of Energy (now DTI) from 1988 to 1994. He is now consulting on all upstream matters, particularly concerning relations with the DTI.

Mr M Romieu
As Chairman and Managing Director of Elf Enterprise Caledonia, Mr Romieu is responsible for his company's exploration and production in the North Sea and other UK waters. As Managing Director of Elf Petroleum UK plc, he is responsible for the financial and administrative support for UK activities. He is currently Vice President of the Institute of Petroleum, President of UKOOA, and President of the Franco-Scottish Business Club. He was awarded an Honorary Degree of Law by the University of Aberdeen in 1993.

Mr J Darby
Mr Darby gained a First Class Honours degree in Oil Technology from the Royal School of Mines, Imperial College, London. He joined Shell International in 1970 as Operations Petroleum Engineer. In 1977 he joined Thomson North Sea as Senior Petroleum Engineer. He was promoted to Technical Director in 1980 and in 1985 was made Chairman and CEO and became Vice President of the International Thomson Organisation, responsible for oil and gas activities in the United Kingdom, United States and Canada. He became Executive Chairman of LASMO North Sea plc in March 1989, following the acquisition by LASMO of Thomson North Sea. In January 1990 he joined the LASMO Board, becoming Chief Operating Officer in June 1992 and Chief Executive Officer in January 1993.

New IP Honorary Secretary

Terry Moore CBE has been appointed as IP Honorary Secretary, with effect from 1 August.

He succeeds David Simons, who is standing down after leaving the oil industry and moving to a new appointment with Clifford Chance.

Mr Moore retired from Conoco at the end of July after a career spanning 30 years. He handed over as Group Managing Director and Chief Executive Officer of Conoco Ltd, responsible for all downstream activities in the United Kingdom, to Steve Theede last year and has been working in Conoco European Management Group on special projects. He joined Conoco in 1965 and has held a number of positions in the company, before becoming Chief Executive Officer in 1987.

During this time he saw the Jet brand, acquired in 1961, grow from a small independent company to become the fifth largest petrol retailer in the United Kingdom.

He was awarded the CBE in the New Year's Honours in 1993, in recognition of his contribution to the company's success.

New East Anglia Branch

Enthusiastic support was given by IP members at a recent meeting in Norwich to a proposal for the formation of a local branch to cover Cambridgeshire, Norfolk and Suffolk. The industry is very active in the region with interests ranging from offshore gas production to the distribution and marketing of road vehicle and domestic heating fuels.

The meeting was convened by Director General, Ian Ward, in response to demands from members working or resident in the area for a local forum for the exchange of energy industry information, personal networking and social fellowship.

Peter Johnson, Branches Committee chairman and Gerry Dunn and Don Garwood, chairmen of London and Essex branches respectively, spoke in support of the idea and gave an outline of the benefits members could enjoy from a local branch. John Evans, Director, Membership Services, promised Head Office support and suggested the formation of a steering group to work on the proposal. Eleven members agreed to serve on this under the chairmanship of Norwich member, Brian Warshaw.

The next meeting will take place in September. Mr Evans said 'Whilst we know the IP members whose contact address is in the area, there will be many others who, whilst resident in East Anglia, are known to us at a business address, for instance in London. If they will get in touch with me I will be very pleased to give them details of the new branch'. He can be reached on 0171 467 7100.

EUROPEAN INVESTMENT BANK

The **EIB**, the financial institution of the European Union, created under the auspices of the Treaty of Rome to facilitate long-term investment financing and to promote the balanced development of the European Union, is currently seeking for its headquarters in **LUXEMBOURG:**

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Applications will be treated in strictest confidence and will not be returned.

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Salary will be on a scale up to £26,430 and opportunities exist to supplement this through consultancy related activities.

Informal enquiries to Professor Adrian C Todd, Head of the Department of Petroleum Engineering, telephone 0131-451 3124.

For an application form and further particulars please contact the Personnel Office, Heriot-Watt University, Riccarton, Edinburgh, EH14 4AS telephone 0131-451 3475 (24 hours) quoting Reference Number 102/95/ PR.

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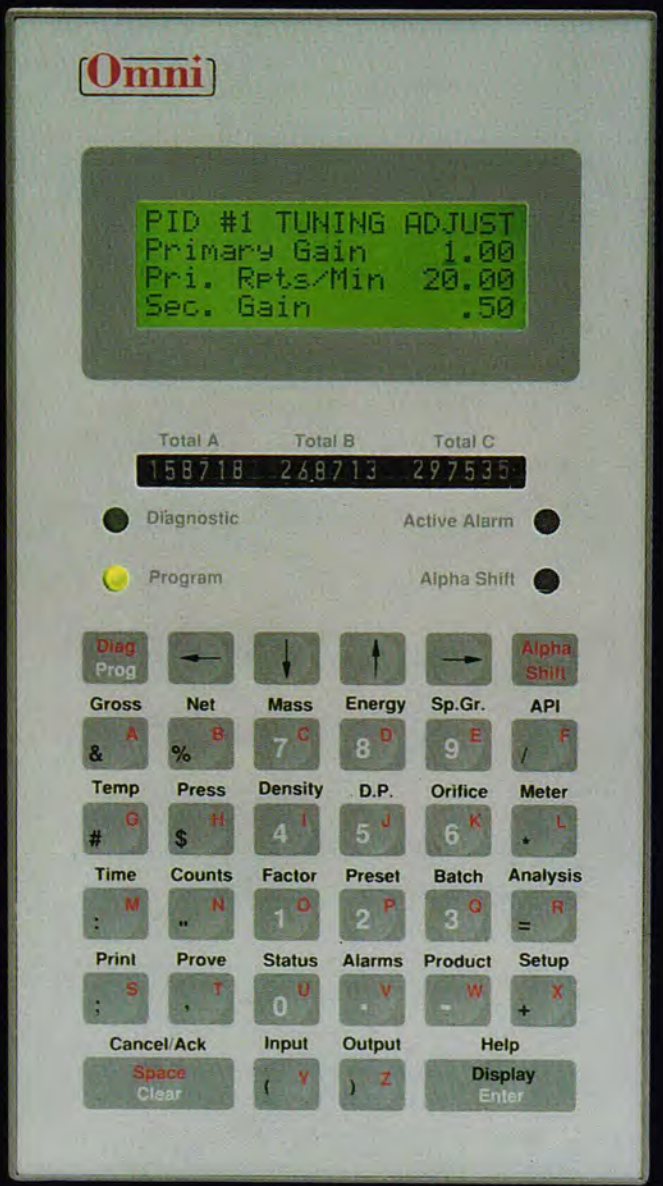

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