

OIL TAXATION – Allowable expenditure – Marine vapour recovery system – Whether expenditure incurred in bringing an asset into existence – Whether incurred in enhancing value of an asset – Whether incurred for purpose of initial treatment (safe loading) – Whether incurred for purpose of initial treatment (separating gas from oil) – Whether incurred for purpose of transportation of oil to place of delivery – Whether incurred for purpose of disposing of oil – OTA 1975 ss.3 and 12 and OTA 1983 s.3(1)

THE SPECIAL COMMISSIONERS

BP EXPLORATION OPERATING COMPANY LTD	Appellant
- and -	
THE COMMISSIONERS OF INLAND REVENUE	Respondents

Special Commissioners: J GORDON REID QC FCI Arb
STEPHEN OLIVER QC

Sitting in Edinburgh on 29 February-3 March 2000

Graham Aaronson QC and Graeme Halkerston, counsel, instructed by the Solicitor to BP Amoco, for the Appellant
Timothy Brennan, counsel, instructed by the Solicitor of Inland Revenue, for the Respondents

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DECISION

Introduction

1. This appeal concerns the tax treatment of expenditure of a little less than £60m incurred in relation to the design and installation of facilities, known as a Marine Vapour Recovery System ("MVRS"); the purpose of the system is to extract and deal with the emission of vapours, known as volatile organic compounds ("VOCs"), in connection with the loading of crude oil into ships' tanks at the Hound Point Terminal on the River Forth at South Queensferry, near Edinburgh. The Appellants ("BP"), who operate the Terminal, claim that the expenditure is deductible and allowable under Section 3 of the Oil Taxation Act 1983 c56. The Respondents (the "Revenue") have disallowed the claim.

2. The appeal was heard at Edinburgh over four days between 29/2/00 and 3/3/00. On the second day, an accompanied site visit took place. BP were represented by Graham Aaronson Q.C., and Graeme Halkerston, barrister. The Revenue were represented by Timothy Brennan.

3. In the course of the hearing, we heard evidence from Graeme Stewart, B.Sc. (Eng.), M.Sc.(Marine Technology), and Chartered Engineer; Christopher Hedley, BSc., PhD, M.I.M.E. and Chartered Engineer; Raymond Burt, B.Eng. (Hons 1st class- Mining and Petroleum Engineering), Philip Joyner, B.Sc (Chemical engineering), F.I.C.E.; Ian Millar, BSc (1st class- Chemical Engineering), corporate member of the Institution of Chemical Engineers, and Brian Warshaw all led by Mr Aaronson; and from Peter Jones B.Sc. (Hons. Upper second-Chemical

Engineering) led by Mr Brennan for the Revenue. We found all witnesses to be generally credible and reliable. The parties produced several bundles of documents consisting of six arch lever files of correspondence, reports, diagrams and photographs. The witnesses, with the exception of Mr Warshaw, all produced written statements which were, in effect, treated by the parties with our approval, as the witnesses' evidence-in-chief. We were also favoured with written submissions from both Mr Aaronson and Mr Brennan, supplemented by oral submissions at the hearing.

4. Finally, we record that it was agreed by all that, although the subject matter of the appeal and the venue of the hearing are north of the Tweed, this is an English appeal; any further appeal will be made through the English judicial system rather than the Court of Session.

Legal Framework

5. BP have appealed against refusals by the Oil Taxation Office of the claims summarized in paragraph 8(1) below. The statutory background is to be found in the Oil Taxation Act 1983 c 56 and the Oil Taxation Act 1975 c22. The relevant provisions of the 1983 Act are as follows: -

"3(1) Subject to section 13 below, this section applies to expenditure (whether or not of a capital nature) which is or was incurred by a person after 30th June 1982 and at or before the time when he is or was a participator in an oil field, being expenditure incurred, subject to subsection (2) below, in acquiring, bringing into existence, or enhancing the value of an asset-

(a) which, at the end of the relevant claim period, is being or is expected to be used in connection with that field; and

(b) which, at the end of the relevant claim period, is or is expected to be a long-term asset; and

(c) which either is not a mobile asset or is a mobile asset which became dedicated to that field in the relevant claim period or in any earlier claim period

(8) In this section "long-term asset" means an asset the useful life of which continues after the end of the claim period in which it is first used in connection with the oil field in question."

15-(2) In this Act "the principal Act" means the Oil Taxation Act 1975

(5) This Act shall be construed as one with Part I of the Principal Act.

The relevant provisions of the 1975 Act, as amended, are as follows: -

1-(1) A tax, to be known as petroleum revenue tax, shall be charged in accordance with this Part of this Act in respect of profits from oil won under the authority of a licence granted under either the Petroleum (Production) Act 1934 or the Petroleum (Production) Act (Northern Ireland) 1964; and in this Part of this Act "oil" means any substance so won or capable of being so won other than methane gas won in the course of operations for making and keeping safe mines.

- (2) For each oil field which is a taxable field the tax shall, in the case of each participator, be chargedon the assessable profit accruing to him in any chargeable period from that field.....

3-(1) Subject to the provisions of this section and Schedules 4, 5 and 6 to this Act, the expenditure allowable under this section for any oil field is any expenditure (whether or not of a capital nature) which, not being expenditure to which section 4 of this Act applies, is incurred by a person at or before the time when he is a participator in the field to the extent subject to subsection (7) below that it is incurred for one or more of the following purposes, namely-

(a) searching for oil anywhere within the area of the field as subsequently determined under Schedule 1 to this Act or not more than 5000 metres beyond the boundary of that area;

(b) making to the Secretary of State any payment under or for the purpose of obtaining a relevant licence, not being a payment by way of royalty or other periodic payment;

(c) ascertaining (whether before or after the determination of the field under Schedule 1 to this Act) the extent or characteristics of any oil-bearing area wholly or partly included in the field, or what the reserves of oil of any such oil-bearing area are;

(d) winning oil from the field;

(e) measuring the quantity of oil won or to be won from the field.

(f) in the case of oil won from the field that was so won from strata in the sea bed and subsoil of either the territorial sea of the United Kingdom or a designated area, transporting it

(i) to the place where it is first landed in the United Kingdom or

(ii) to the place in the United Kingdom or, in the case of oil first landed in another country, to the place in that or any other country (other than the United Kingdom) at which the seller in a sale at arm's length could reasonably be expected to deliver it or, if there is more than one place at which he could reasonably be expected to deliver it, the one nearest to the place of extraction;

(g) the initial treatment or the initial storage of oil won from the field;

(h) disposing of any oil won from the field which is disposed of crude in sales at arm's length;

(hh) obtaining an abandonment guarantee, as defined in section 104 of the Finance Act 1991;

(i) closing down, decommissioning, abandoning or wholly or partially dismantling or removing any qualifying asset;

(j) carrying out qualifying restoration work consequential upon the closing down of the field or any part of it.

(5B) Expenditure incurred by a participator in an oil field shall be taken to be incurred for the purpose mentioned in paragraph (hh) of subsection (1) above if, and only if-

(a) it consists of fees, commission or incidental costs incurred wholly and exclusively for the purposes of obtaining an abandonment guarantee; and

(b) the abandonment guarantee is obtained in order to comply with a term of a relevant agreement relating to that field under which the participator is required to provide security (whether or not specifically in the form of an abandonment guarantee) in respect of his liabilities to contribute to field abandonment costs;

and expressions used in this subsection shall be construed in accordance with section 104 of the Finance Act 1991

12(1) In this part of this Act-

"crude", where the reference is to oil being disposed of or appropriated crude, refers to its being so dealt with without having been refined (whether or not it has previously undergone initial treatment);

"initial storage", in relation to oil won from an oil field, means the storage in the United Kingdom, the territorial sea thereof or a designated area of a quantity of oil won from the field not exceeding, in the case of storage in the United Kingdom or another country, a quantity equal to ten times the maximum daily production rate of oil for the field as planned or achieved (whichever is the greater), but does not include-

(a) the storing of oil as part of or in conjunction with the operation of an oil refinery; or

(b) deballasting; or

(c) conveying oil in a pipe-line

"initial treatment", in relation to oil from an oil field, means the doing, at any place in the United Kingdom, the territorial sea thereof or a designated area, of any of the following things, that is to say-

(a) subjecting oil won from the field to any process of which the sole purpose is to enable the oil to be safely stored, safely loaded into a tanker or safely accepted by an oil refinery; or

(b) separating oil so won and consisting of gas from other oil so won; or

(c) separating oil so won and consisting of gas of a kind that is transported and sold in normal commercial practice from other oil so won and consisting of gas; or

(d) liquefying oil so won and consisting of gas of such a kind as aforesaid for the purpose of transporting it; or

(e) subjecting oil so won to any process of which the purpose is to secure that oil disposed of crude has the quality that is normal for oil so disposed of from the field,

but does not include-

(i) the storing of oil even where this involves the doing to the oil of things within any of paragraphs (a) to (e) of this definition or

(ii) any activity carried on as part of, or in association with, the refining of oil not consisting of gas or any activity the sole or main purpose of which is to achieve a chemical reaction in respect of oil consisting of gas; or

(iii) deballasting;

(2) In this Part of this Act any reference to the use of an asset in connection with an oil field is a reference to its use in connection with that field for one or more of the purposes mentioned in section 3(1) of this Act (excluding section 3(1)(b)).

6. We have underlined the provisions which were the subject of detailed submissions. We were also referred to certain provisions of the Petroleum (Production) Act 1934, as amended, as follows: -

2(1) The Secretary of State shall at any time have power to grant to such persons as he thinks fit licences to search and bore for and get petroleum to which subsection (2) of section 1 of this Act applies at that time.

1(2)this subsection applies at any time to petroleum which at that time exists in its natural condition in strata in Great Britain or beneath the territorial waters of the United Kingdom.....

7. We were not referred in detail to any other statutory provisions. The broad issue for our determination is whether the expenditure referred to above is expenditure within the meaning of one or more of the relevant statutory provisions and thus an allowable deduction in computing the profits which are chargeable to tax, namely petroleum revenue tax {"PRT"}. In order to answer this question, it is necessary to consider the factual background in some detail and thereafter to consider whether the factual circumstances fall within the necessary statutory criteria, soundly construed, which require to be met to enable expenditure to be so deducted. We shall return to these matters at a later stage in this Decision.

Findings of Fact

8. We have confined our findings to the facts which bear upon the broad issue outlined above. It is therefore not necessary to consider and make detailed findings on every aspect of BP's operations at Hound Point and Dalmeny. Much of the background facts have been culled from a report prepared by Mr Jones. We have given appropriate references where our findings are based wholly or partly upon that report. It had been anticipated by the parties that they would reach agreement on large areas of factual matter. However, no agreed statement of facts was produced; nor was there express agreement on the factual narratives in the expert reports. Where appropriate, we have indicated in our findings of fact the document or witness statement which is the source and basis of the factual finding. Although the witnesses were in general agreement in relation to the basic factual background, there was a difference of emphasis on some matters. In relation to these, we have had to make a choice or make factual findings in more restricted terms than we might otherwise have made, had all the evidence been clear and uncontroversial. Having regard to the evidence led, including the

witness statements and reports and the sundry documents produced and relied upon [many of these documents were not referred to in evidence or submissions], we find the following facts admitted or proved: -

(1) BP has appealed against the disallowance of £3,944,000 (claim No 106) and £20,670,323 (Claim no 108), £38,151,971 (claim No 110), £15,739,097 (Claim No 112) in decisions dated 12/5/98, 12/5/98, 11/9/98 and 17/5/99 but only to the extent of £3,944,000, £15,208,000, £28,993,000 and £8,286,054 ie a total of £56,431,054. These decisions were made under paragraph 3 of Schedule 5 to the Oil Taxation Act 1975 and relate to claims made by BP under Schedule 6 to that Act.

(2) The expenditure was incurred at a time when BP was a participator in an oil field.

Description of the MVR Plant and its Context

(3) The MVR plant is co-located with two existing facilities of the Forties Pipeline System (FPS) – at the Hound Point loading berths in the Firth of Forth and at the Dalmeny storage facility. The FPS is owned by BP. Prior to describing the MVRP and in order to place our description of the facility in its proper context, a description of the FPS is given first. [Jones Report para 11]

(a) The Forties Pipeline System

(4) The Forties Pipeline System (FPS) was commissioned in 1975, initially to transport unstabilised crude oil from the BP/Shell/Esso Forties field (located in the UK Central North Sea) to the UK mainland for processing. The 169-km, 36-inch subsea pipeline from the Forties field terminates at the Cruden Bay reception terminal in Aberdeenshire, on Scotland's east coast. From Cruden Bay the liquids are transported through a 206-km, 36-inch onshore pipeline and 2 pumping stations to a conventional stabilisation plant at the Kerse of Kinneil, near Grangemouth on the Firth of Forth, the site of BP Amoco's large oil refinery and petrochemical complex. [Jones Report para 12]

(5) Initially, the Forties C platform acted as the central gathering point for production from the other Forties offshore platforms and for third-party oil from other fields. In 1993, a normally-unmanned riser platform (Forties Unity) was installed to act as the collection point for the additional fields which were linked to the FPS subsequently. [Jones Report para 13]

(6) The Kinneil stabilisation plant was initially a two-train facility (i.e. two identical processing trains operating in parallel). However it was subsequently expanded to a three-train facility in order to be able to handle increased throughput in the 1990s. [Jones Report para 14]

(7) At Kinneil, the unstabilised crude oil undergoes a two-stage flash separation process which produces a raw gas stream and stabilised crude. The raw gas is processed in a series of distillation columns to separate and recover gas liquids (propane, butane and naphtha). The gas liquids are either utilised as feedstocks in the Grangemouth refinery and/or petrochemical complex or exported. [Jones Report para 15]

(8) Some of the stabilised crude oil is routed to the Grangemouth refinery as feedstock. The remainder is pumped through a 19-km, 13-inch pipeline from

Kinneil to the Dalmeny storage facility. From Dalmeny the crude oil is pumped through a 3-km buried land pipeline and a 1-km subsea pipeline to the two berths at the Hound Point loading terminal from which it is exported. [Jones Report para 16]. Hound Point Terminal 1 is owned by the Forth Ports Authority. BP are, however responsible for it, as occupiers, even although they have no lease with the Authority. BP own Hound Point Terminals 2 and 3.

(9) From the storage tanks in the Grangemouth refinery, it is also possible, if required, to transfer the crude oil to Finnart on the Firth of Clyde where it can be stored temporarily. Utilising the storage tank capacity at the Grangemouth refinery and/or the storage facilities at Finnart provides an additional degree of operating and scheduling flexibility for the FPS. For example, if tankers are unable to load at Hound Point due to strong wind and tankage capacity at Dalmeny is fully utilised, in order to avoid offshore field shut-in the crude oil flowing through the FPS can be diverted to tankage at the Grangemouth refinery and/or Finnart. [Jones Report para 17]

(10) At Hound Point a single berth was provided initially but a second berth was installed to cater for the increase in system throughput anticipated during the 1990s. Currently, berth no.1 is capable of loading ships up to 300,000 deadweight tonnes (DWT). Berth no.2 is capable of loading ships up to 150,000 DWT. [Jones Report para 18]

(11) In 1983, oil from the South Brae field, operated by Marathon, began to be transported through the FPS under a tariff arrangement. Subsequently, production from numerous other fields has been transported through the FPS and the pipeline and associated facilities were expanded in order to be able to handle the increase in throughput. Currently, in excess of 25 fields utilise the FPS. One of these, Heimdal, is located in Norwegian waters; the remainder are located on the UK Continental Shelf (UKCS). In the future it is likely that production from several new fields will also be routed through the FPS [Jones Report para 19]. Document A/66 entitled Forties Pipeline System Nov 99 fig 1 accurately depicts the FPS from the various oil fields down to Hound Point and Dalmeny.

(12) Currently, while liquid flow through the FPS is around 0.9 million barrels per day (0.9MMBPD), only 77 thousand barrels per day (77 MBPD) emanate from the Forties field itself. (Peak production from Forties was in excess of 400 MBPD.) Currently, the majority of FPS throughput comprises production from the other fields which utilise the pipeline under tariff arrangements. BP has no equity interest in some of these fields, as illustrated in document A/64 entitled "Table 1 Forties Pipeline System : Estimated 1999 Throughput." Consequently, of the approximately 1 MMBPD current FPS throughput, only some 268 MBPD (27.5%) produced and owned (within the FPS) by BP. [Jones Report para 20]

(13) Since 1983, when production from the South Brae field began to be transported through the FPS, the crude oil exported from Hound Point has been known generally as Forties Blend. [Jones Report para 21]

(14) From 1975 to the end of 1998, i.e. before the MVRP was commissioned, crude oil was loaded out of the Hound Point terminal in much the same way as that observed at virtually every other crude oil export terminal in the world. This standard (and widely accepted safe) industry practice involves pumping (or gravity loading) the crude oil onto the tanker, with the cargo tank inert gases being vented to atmosphere together with (a) any volatile organic compounds (VOCs) already present in the inert gas and (b) any VOCs emanating from the cargo during loading. In order to minimise VOC evolution, the crude oil is

generally admitted to the bottom of the cargo storage tanks so that as soon as a liquid level is established the bulk of the cargo delivered into the tank is admitted under a liquid seal. Nevertheless, the slight reduction in pressure which occurs when the oil flows out of the pipe within the tank, coupled with agitation of the liquid itself, results in liberation of VOCs. As the liquid level in the cargo tank rises, the VOCs mix with the inert gas already in the tank. The VOCs/inert gas mixture is emitted, via vent pipes, to atmosphere as the liquid level in the cargo tank rises. [Jones Report para 22]

(15) The vapour pressure of the Forties Blend crude oil loaded at Hound Point is typically in the range 0.61-0.76 bar (8.8-11.0 psi) measured by the Reid Vapour Pressure (RVP) technique. Although RVP does not equate precisely to True Vapour Pressure (TVP), the observed level of Forties Blend RVP means that, effectively, the crude loaded at Hound Point will not vaporise at its storage/loading temperature. More precisely, it will not vaporise if it is maintained at atmospheric pressure in a closed container where the vapour phase is in equilibrium with the liquid phase. [Jones Report para 23]

(16) However, vaporisation does occur when the vapour space above the liquid is not in equilibrium with the liquid phase. This latter situation arises when the vapour phase is inert gas because at the start of loading the VOC concentration (3.8% volume) in the vapour phase is less than the natural or equilibrium VOC content (up to 50-60% volume) observed at the completion of loading. VOCs flow from the liquid to the vapour phase in order to correct this concentration imbalance. (This is the same vaporisation effect that would be observed if the crude oil were to be stored in tanks open directly to the atmosphere, even though the temperature of the oil is less than its boiling point.) The VOCs do not evolve until the oil is admitted to the cargo tanks onboard the ship. [Jones Report para 24]

(17) When crude oil vaporises in this way and the VOCs are allowed to escape to the atmosphere, the malodour imparted to them by the mercaptans (sulphur compounds) naturally present in the oil is detectable by the human nose at low concentrations and over long distances. The VOCs also contain small quantities of benzene (a carcinogen). [Jones Report para 25]. These quantities were less, i.e. safer, than what is regarded as acceptable. The quantities measured at Hound Point or in the vicinity thereof were in the order of 3.4ppm (parts per million). The acceptable standard is currently 5ppm.

(18) When tankers arrive at Hound Point their cargo tanks contain residual amounts (in liquid form) of the previous cargo under an inert gas (ship's boiler flue gas) blanket. Typically, this residual oil comprises less than 0.5% of the previous cargo volume. [Jones Report para 26]

(19) The inert gas in the cargo tanks is added during and after the previous cargo unloading operation in order to avoid air ingress to the tanks, thereby avoiding the possibility of forming explosive mixtures of hydrocarbons and oxygen. As the previous cargo is offloaded, a small portion of the cargo vaporises to fill the increasing vapour space (otherwise a vacuum would be formed). Flue gas is admitted at this point to ensure minimal air ingress via the ship's pressure/vacuum (P/V) valves. When offloading is completed the cargo tanks are purged with flue gas until the oxygen content declines to less than 6.0% volume. [Jones Report para 27]

(20) Thus the gases contained in the cargo tanks on arrival for the next loading contain both inert gas and VOCs. The composition of the gases in the cargo tanks

varies from ship-to-ship and from voyage-to-voyage. Research undertaken by BP suggests that the range of and average ship cargo tank flue gas compositions prior to loading are:

- inert gases range 100-85% volume; average 96.2% volume;
- hydrocarbons range 0-15% volume; average 3.8% volume.

Due to normal diffusion processes, on arrival at the loading berths the VOCS present in the inert gas in the ship's cargo tanks are distributed evenly throughout the cargo tank vapour space. [Jones Report para 28]

(21) When loading commences, the liquid level in the cargo tanks begins to increase. This increase in liquid inventory results in the gas within the tanks being compressed. In order to relieve this pressure and to prevent the cargo tanks bursting, historically, the gases were vented to atmosphere. The gases leave the cargo tanks via pipework connections which enter a vent gas manifold. Depending on ship vent system design, the gases are ejected from the vent gas manifold to atmosphere either just above deck level through a small number of vents or from a single masthead pipe, the end-point of which is some distance above deck level. Gas flow from the tanks is routed to the collection manifold via the individual cargo tank P/V valves. Venting gases to atmosphere in this way reflected previous Hound Point and current general industry practice. [Jones Report para 29]

(22) As loading progresses, incremental VOCs are liberated from the crude oil being loaded. Thus the VOC content of the gases within the cargo tanks increases as the loading progresses. At the completion of loading the VOC content of the emitted gases may reach 60% volume but the average level is estimated at 25.4% volume. The continuous liberation of VOCs from the crude oil during loading results in the volume of gases emitted from the cargo tanks being higher than the volume of gases present in the cargo tanks on arrival at the terminal. The magnitude of this increase is in the range 10-50%. [Jones Report para 30]

(23) The net effect of these phenomena is that the VOCs emitted during loading emanate partly from the inert gas present when the tankers arrive at Hound Point and partly from the crude oil loaded at the terminal. On average, approximately 10-15% of the VOCs emanate from the inert gas present in the cargo tanks on arrival. The remaining 85-90% emanate from the crude oil loaded at the terminal. [Jones Report para 31]

(24) The VOC content of the inert gases which had previously been vented to atmosphere is low initially (on average 3.8% volume). In addition, because loading commences at a relatively low rate (until all control systems are confirmed to be operating satisfactorily), the volumetric rate at which VOCs would previously have been emitted to atmosphere is low. As loading progresses and the rate of loading increases, the volumetric rate of emission of VOCs vented to atmosphere will increase. This increase is exacerbated by the fact that the VOC content of the cargo tank inert gas gradually increases as a result of the liberation of VOCs from the crude oil being loaded. [Jones Report para 32]

(25) Annually, at current FPS throughput, the volume of VOCs emitted from tankers loading at Hound Point and routed to the MVR plant is around 30,000 tonnes. [Jones Report para 33]

(b) MVR Plant Design and Operation

(26) The MVR plant comprises three parts: an offshore collection system comprising vapour recovery booms and gathering pipework (located on the two loading berths at Hound Point); an offshore compression facility platform (located between the two loading berths at Hound Point); and an onshore recovery plant (located at the Dalmeny storage facility) . "Document A/67 entitled "MVR plant Simplified Process Flow Diagram Berths and Offshore Platform (sic) Nov 99 Fig 2" is an accurate Schematic showing the facilities at Hound Point. Document A/68 entitled "MVR plant Simplified Process Flow Diagram Onshore Dalmeny Nov 99 Fig 3" is an accurate Schematic showing the facilities at Dalmeny. [Jones Report para 37]

(27) All tankers arriving at Hound Point have been modified to facilitate VOC recovery. These modifications comprise the installation of additional pipework connected to the existing vent gas pipework on the ship. The new pipework gathers the cargo tank vented gases in a manifold which is connected to a common flanged connection point, or, on the larger ships, to two common flanged connection points, which can be connected to the vapour recovery booms located at the two loading berths at Hound Point. Thus the gases emitted from the cargo tanks during crude oil loading at Hound Point are now routed via new shipside lines to the vapour recovery booms (two on berth 1 and one on berth 2) and thence to the compression platform located offshore in between the two berths. The two vapour recovery booms on berth 1 are dedicated to this service. On berth 2, the boom currently used for vapour recovery may also be used for crude oil loading, there is another boom on berth 2 which is currently used for crude oil loading and which could also be used for vapour recovery. The interchangeable spare capacity provided on berth 2 is a consequence of converting one existing crude oil loading boom to vapour recovery service and of providing vapour recovery pipework which may be connected to one of the other crude oil loading booms. This approach reflects the most cost-effective means of providing redundant vapour recovery capacity at this point. This capacity is unlikely to be used during the course of normal operations. Document A/7 entitled "Attachment B Marine Vapour Recovery Project" is a schematic which shows accurately, in red, albeit generally, the facilities installed as part of the MVR plant. In summary, the loading berths at Hound Point were modified; new vapour recovery arms or booms were installed along with pipework to connect them to a new offshore platform; this new platform was installed between the two existing loading berths. A 1km long marine pipeline, 16 inches in diameter was constructed to return compressed recovered vapours from the new platform to the shore. A parallel line of 4 inch diameter was installed to return to shore liquids knocked out in the vapour compression process; related power and control cables were installed in the same trench. The marine pipeline was installed between the existing large diameter pipelines which carry crude oil and ballast water to and from the offshore tanker berths. New petrochemical processing facilities were constructed at Dalmeny. The Dalmeny site was surrounded by a 30m berm or bund to screen the facilities from the surrounding areas. To accommodate the new facilities, over half a million tonnes of spent oil shale had to be relocated. Extensive environmental work was carried out to enhance the appearance of the plant. [Jones Report para 38]

(28) It is general industry practice that when cargoes are sold on a free-on-board (FOB) basis title to the oil passes to the buyer as the oil flows past the ship/shore connection flange at the loading point which is located downstream of the fiscal meter. (The loading flange is essentially the mechanical joint connection between the loading boom on the berth and the pipework on the ship.) This is confirmed in Section 5, risk and Property, of BP Oil International's document entitled: Conditions of Sale – Crude Petroleum F.O.B. – Single Shipment, February 1994 edition, which provides as follows:

"Notwithstanding any right of the Seller to retain documents until payment, the risk and property in the crude oil delivered under the Agreement shall pass to the Buyer as the crude oil passes the tankship's permanent hose connection at the loading terminal."

As the oil is loaded onto the ship, VOCs emanating from both the previous cargo and the crude oil being loaded are expelled together with the inert gas. The VOCs are emitted from the ship's cargo tanks and routed into the vapour recovery collection pipework. Around 10-15% of the VOCs emanate from the previous cargo and 85-90% emanate from the crude oil being loaded. The 85-90% emanating from the crude oil being loaded is actually owned at the point of collection by the third-party purchasers of the crude oil, the tanker owner merely acting on behalf of the purchaser. In 1998 and 1999 between about 54% and 100% of deliveries of crude oil at Hound Point were the subject of arms-length sales. These figures exclude deliveries to the refinery at Grangemouth. The upstream oil production company usually sells its equity oil to a third-party or to one of its downstream affiliates. [Jones Report para 39]

(29) The volume of gases emitted during loading from the ship's cargo tanks is some 10-50% greater than the volume of cargo loaded. The increase is due to the VOCs liberated from the crude oil being loaded. Therefore, the tanker inert gas component of the feedstock routed to the MVR plant is 65-90% of the total by volume. Thus the average VOC content of the MVR plant feedstock is just 10-35% by volume. [Jones Report para 40]

(30) On the compression platform entrained liquids (water and small quantities of VOCs) are removed prior to compression of the recovered vapours. The water/VOC mixture is routed to the drains system on berths 1 and 2, from which location the contaminated water is routed to Dalmeny for treatment. The vapours (a mixture of inert gas and VOCs, predominantly the former) are then compressed to a pressure of circa 5.5 bars gauge (barg) and cooled by seawater and refrigerant (ammonia) to 5°C (to remove further quantities of water and VOCs as liquids) before being routed ashore via a 16-inch subsea pipeline. The foregoing is depicted schematically in document A/67 [Jones Report para 41]

(31) The liquid VOCs collected on the offshore compression platform are separated from water and are pumped ashore via a separate 4-inch subsea pipeline. This line follows a different route back to Dalmeny compared with the route followed by the main oil export line. Approximately 40% of the VOCs recovered from the ship are liquefied on the compression platform. [Jones Report para 42]

(32) At Dalmeny the collected vapours are passed vertically upwards through a descending stream of kerosene cooled to 20°C. This is achieved in the (kerosene) Absorber column at a pressure of 4.0-4.5 barg. At this point the kerosene absorbs most of the VOCs present in the vapour. The unrecovered VOCs (5-15%) pass from the top of the Absorber and are utilised as fuel in the fired (kerosene) Stripper Reboiler. [Jones Report para 43]

(33) The (rich) kerosene containing the recovered VOCs is heated and passed to the (kerosene) Stripper where the absorbed VOCs are removed from the kerosene by distillation and heat. This tower operates at a pressure of around 3.3 barg, the Stripper Reboiler being operated at a temperature of 260°C. The vapour overheads from the Stripper are cooled and the liquids condensed from this vapour are routed back into the top of the tower as internal reflux. Some of the

overhead vapour product is used as fuel for the fired Stripper Reboiler while the remainder is routed to the Crude Oil Absorber. {Jones Report para 44}.

(34) The (lean) kerosene (i.e. kerosene with VOCs removed) from the Stripper is cooled and passed back to the (kerosene) Absorber. [Jones Report para 45]

(35) The liquefied VOCs recovered offshore and the main portion of the overhead vapour product from the Stripper are routed to the Crude Oil Absorber. In this tower the vapour from the Stripper passes vertically upward against a countercurrent flow of crude oil taken as a slipstream from the main Kinneil – Dalmeny pipeline. The crude oil absorbs most of the VOC vapours, the unrecovered vapour passing from the top of the Absorber being used as fuel gas in the Stripper Reboiler. The liquefied VOCs recovered offshore are injected into the bottom of the Absorber where they are absorbed into the crude oil stream exiting the bottom of the tower. The foregoing processes at Dalmeny described in this and the preceding three paragraphs are accurately depicted schematically in document A/68 [Jones Report para 46]

(36) The Crude Oil Absorber operates at a pressure of around 1.9 barg. The incoming (lean) crude oil is at a temperature of 30-35°C. The (rich) crude oil (i.e. containing absorbed VOCs) leaves the bottom of the Crude Oil Absorber and is pumped back into the main Kinneil – Dalmeny pipeline whence it flows to tankage at Dalmeny. [Jones Report para 47]

(37) Depending on the temperature and vapour pressure of the incoming crude oil, the rate of loading and the number of tankers (i.e. one or two) loading, the overall VOC recovery efficiency (i.e. recovery into crude oil plus the amount consumed as fuel in the MVR plant) is of the order of 85-95%. [Jones Report para 48] The temperature of the oil loaded at Hound Point has risen during the last six years. In 1993, the average export temperature was 24°C whereas the present average is 35°C. The increase is the result of additional throughput at Dalmeny and Hound Point over recent years. As throughput increases, the oil which arrives at Dalmeny at an average temperature of 37°C has less time to cool. The graphs at A/42-44 were prepared by Mr Ian Miller. These graphs show respectively, the percentage increase in VOC emissions plotted against the temperature rise in the oil loaded, the increased oil throughput at Dalmeny/Hound Point, and the level of VOC emission as affected by increasing oil temperature.

(38) The volume of VOCs recovered and re-injected back into the Forties Blend stream is relatively small compared with the total oil export volume. Quantification of the VOC re-injection volume is discerned from the difference in the density of the export crude oil before and after VOC re-injection. On average, assuming that the MVR plant feedrate is 30,000 tonnes per annum and the FPS throughput is 1 MMBPD, the VOC re-injection volume is around 0.06-0.07% of the crude oil export volume. Because the quantity of VOC re-injected is so small, it is impossible to differentiate between the quality of oil with and without re-injected VOC. [Jones Report para 49].

(39) The installation of the MVR plant and its commissioning in late 1998 were not required by any statutory enactment in the United Kingdom, nor by any EC rule, regulation or Directive, nor by any provision of international law or code. {Jones Report para 50}

(40) The MVR plant is operated by the same personnel who operate the Hound Point Terminal and the storage facilities at Dalmeny. The onshore part of the MVR plant is within the Dalmeny site, although it had to be extended to accommodate

it. A completely separate facility could have been established and a completely separate team of personnel could have been employed to operate it. This would have been less cost effective and would have required close operational liaison with the existing Dalmeny and Hound Point personnel. [Jones Report para 51]

(41) The operation of the MVR plant is aligned with the tanker loading operation at Hound Point and, in effect, with the operation of the FPS. [Jones Report para 52]

(42) Scheduling of the refinery and use of the crude oil tankage facilities within the finery (and Finnart) are factors considered during the scheduling of the FPS. Generally, on a rolling monthly basis, field, FPS and Grangemouth refinery throughputs and crude oil storage capacities will be reviewed carefully in order to ensure that tankers are scheduled to arrive at Hound Point when sufficient crude oil is available to lift and before tankage is full. [Jones Report para 53]

The Nature and Source of the Hydrocarbons Recovered

(43) The VOCs recovered by the MVR plant emanate from two distinct sources. On average, approximately 10-15% emanate from hydrocarbons present in the tanker cargo tanks on arrival at Hound Point. The remaining 85-90% emanate from the crude oil loaded from the FPS. Not all the recovered VOC stream derive from geological strata underlying the UK Continental Shelf. Some of it emanates from a wide variety of other sources determined by the source of the previous cargo carried by the tankers loading at Hound Point. Since the oil tanker shipping fleet tends to operate internationally, the residual oil and VOCs onboard on arrival at Hound Point could have originated from numerous countries. [Jones Report para 54]

(44) The majority of the remaining 85-90% emanate from a large number of offshore fields other than Forties. These fields produce liquids which are then transported through the FPS under tariff arrangements. At least one such field (Heimdal) is situated in Norwegian waters. Thus some of the VOCs recovered from the crude oil loaded at Hound Point emanate from geological strata outside the UK. [Jones Report para 55]

(45) BP transports oil through the FPS for numerous producers (both British and Norwegian) and charges these companies on a tariff basis. The contractual arrangements between the parties which determine entitlements to crude oil volumes at Hound Point are based on measurements taken by turbine meters (the fiscal meters) at the Dalmeny site, i.e. just upstream of (before) the point where the crude is loaded onto tankers at Hound Point. The collection and recovery of VOCs occur downstream (after) the cargo measurement point, initially on the tanker in the piping installed thereon, then on the offshore compression platform located between the two loading berths, and finally in the onshore absorption/stripping plant at Dalmeny. [Jones Report para 56]

(46) The individual contractual arrangements between BP and tariffees provide for delivery of the latter's crude oil entitlements at the loading flange at the Hound Point berths. Tariffees and their customers appear to obtain no benefit from the VOCs recovered from the crude oil and the transportation service provided by BP does not include VOC recovery. Tariffees did not contribute to the capital cost of the facility, they do not contribute to the operating cost of the facility and they do not receive a share of the VOCs recovered from their customers' oil. The FPS Pipeline Liquids Transportation and Processing Agreement has not been modified since the construction and commissioning of the MVR plant

and tariff arrangements have not been modified to include either the use of the MVR plant or to meet its operating costs. The oil is actually owned by the downstream purchaser because, contractually, title to the oil passes to the purchaser at the loading flange on the berth. [Jones Report para 57]

(47) The MVRP recovers VOCs from oil owned by third-parties who have purchased the oil from FPS tariffees and BP at a point on the berth downstream of the fiscal meters located in Dalmeny. Thus all the oil transported belongs to companies other than BP and no VOC recovery service is provided to these companies. [Jones Report para 58]

The Relationship between the FPS and the MVR Plant

(48) The FPS operated without the MVR plant through the period 1975-1998, in much the same way as other crude oil export terminals operate currently. [Jones Report para 59]

(49) The FPS and associated terminal facilities were designed to separate oil and gas and to store and export oil and gas liquids emanating from geological strata underlying the UK Continental Shelf. In this respect the pipeline and terminal facilities were absolutely conventional, being based on standard flash separation and distillation processes. Since the MVR plant has been commissioned, all the existing FPS facilities (the subsea pipeline, the Cruden Bay terminal, the Kinneil stabilisation plant and the Dalmeny storage facility) continue to operate in the same way as they have done since initial start-up. [Jones Report para 60]

(50) The function of the MVR plant is to separate oil (only some of which emanates from geological strata underlying the UK Continental Shelf) from ship cargo tank inert (flue) gas. [Jones Report para 61]

(51) In addition, the MVR plant employs processes which are not generally employed in crude oil stabilisation facilities. For example, processes based on light hydrocarbon absorption into cold kerosene are generally not found within crude oil stabilisation plants. Similarly, the kerosene stripping (desorption) process utilised in the MVR plant is not generally found within crude oil stabilisation plants. Neither is the crude oil absorption process employed on the tail-end of the MVR plant found typically in crude oil stabilisation facilities. These types of process tend generally to be found in downstream processing facilities like oil refineries. [Jones Report para 62]

(52) Operating the MVR plant involves a high degree of process plant optimisation. This requirement is caused by continually varying throughput, significant continually varying feedstock composition, together with frequent start-up and shutdown requirements. [Jones Report para 63] None of the staff is allocated exclusively to the MVR plant or to the crude oil operations. Asset craftsmen maintain all the plant without demarcation. Since the installation of the MVR plant there has been only minimal increase in the total personnel at Hound Point and no overall increase at Dalmeny. The operators cover both areas without demarcation and the leadership team have responsibility for both Dalmeny and Hound Point. Operations at Hound Point are contracted out by BPA. The facilities at Dalmeny and Hound Point are both controlled from the same point, namely from the Control Room at Dalmeny using a single computer management system. From there, pumps and compressors can be stopped or started and controlled; valves can be opened and closed; flow rates, temperature and pressure can be controlled; all these operations are carried out from the Control Room. If loading ceases, the MVR plant is shut down. If the MVR plant ceases to operate then

loading is usually but not always suspended. Since it became operational, the MVR plant has been about 50% operational. That is to say, about one half of the total crude oil loaded at Hound Point has been loaded in conjunction with the operation of the MVR plant. Hound Point's electricity source comes from Dalmeny. The original crude loading safety and shutdown system has been integrated with the MVR plant. There is no control equipment dedicated only to the MVR plant. Bundle E contains the Marine Vapour Recovery Project Operating Manual. It was produced in about December 1998. It provides inter alia as follows: -

"2.1 The process of the Marine Vapour Recovery Plant is to eliminate essentially all VOCs (Volatile Organic Compounds) currently released to atmosphere during crude loading operations. This is to be achieved through a combination of recovery and combustion and is to have minimal impact on the pre-existing crude oil receiving and loading operations.

3.2 The nature of the vapour recovery process makes the MVR plant a fully integrated process with the existing crude loading installations ..."

(53) The MVR plant has to cater for flow rates as low as 1,750 normal cubic metres/hour when starting up, 8,500-34,000 normal cubic metres/hour during steady (constant flow) operations, and low rates nearing the completion of loading. [Jones Report para 64]

(54) In the FPS, significant operational changes will be much less frequent and wide, rapid compositional changes rare. The required qualifications and experience of the staff who operate both the MVR plant and the FPS will, therefore, be different from those required of staff operating the FPS without the MVR plant. A higher degree of process operational experience is required for the MVR plant, as would be the case for operators employed in downstream processing facilities like oil refineries. [Jones Report para 65]

(55) It is not surprising that the MVR plant is located close to assets forming part of the FPS. This is a reflection of capital and operating cost optimisation. While the MVR plant could have been separated completely from the existing FPS assets, this would have been impractical in terms of facilitating construction approvals, minimising environmental implications and minimising costs. Co-locating the facility at Dalmeny would have reduced costs associated with utility systems, fire-fighting facilities, spillage containment etc. Also, for aesthetic reasons, locating the MVR plant within the 30m-high berm at Dalmeny would have been an important factor in gaining planning consent for the facility. [Jones Report para 66]

(56) The development of regulation can be traced from three primary sources namely the United Nations Economic Commission for Europe ("UN/ECE"), the International Maritime Organisation ("IMO") and the European Community.

(57) UN/ECE provides the forum for countries from North America, Europe and Central Asia to discuss economic matters. The countries associated with UN/ECE account for 60% of world carbon-dioxide discharge and have sought to initiate legislation for reductions in VOC emissions.

(58) A UN/ECE Protocol on the Control of Emissions of VOCs was signed by the United Kingdom on 19th November 1991 and was ratified on 14th June 1994. The United Kingdom undertook to abide by Article 2(2)(a) as follows: -

"It shall, as soon as possible and as a first step, take effective measures to reduce its annual emissions of VOCs by at least 30 per cent by the year 1999, using 1988 levels as a basis or any other annual level during the period 1984 to 1990, which it may specify upon signature of or accession to the present Protocol."

(59) Currently, the Protocol has been signed by twenty-three nations and ratified by seventeen of these. It entered into force on 29th September 1997. It was as a result of this Protocol that the European commission developed and adopted Council directive 94/63/EC referred to in finding 61 below.

(60) Also, in the early 1990's the IMO was proposing to regulate the control of VOC emissions in marine ports and terminals under the International Convention for the Prevention of Pollution from Ships, 1973, as modified by a Protocol of 1978. This is commonly known as "MARPOL 73/78".

(61) The European Parliament and Council Directive 94/63/EC of 20th December 1994 on the Control of VOC Emissions Resulting from the Storage of Petrol and its Distribution from Terminals to Service Stations specified, when looking to the future, that: -

"Whereas, on grounds of international standardization and of safety during the loading of ships, standards must be drawn up at International Maritime Organisation level for vapour control and recovery systems to apply to both loading installations, and ships; whereas the Community must therefore endeavour to ensure that the necessary provisions are introduced into the MARPOL Convention during the current revision of MARPOL due to be completed in 1996; whereas in the event that the MARPOL Convention is not so revised, the Community, after discussion with its major trading partners, should propose appropriate measures to apply to ships and port installations servicing ships; ...".

(62) In response to an enquiry by Mr Woods' firm, the Air and Environment Quality Division of the Department of the Environment replied, by letter dated 26/10/98 [A/37] stating that "Regulation 15 of MARPOL Annex VI Will cover VOC emissions from sea-going ships, but this is unlikely to be in force for at least 6-8 years. Any company currently fitting tanker ship loading/discharging facilities with a vapour recovery system is doing so voluntarily, anticipating the fact that such equipment may become mandatory in future.....the Marine and Coastguard Agency have advised that crude oil vapour emission will also be covered by Annex VI of MARPOL."

(63) The main provisions of Regulation 15 of MARPOL Annex VI are that the opportunity is given for contracting parties to introduce control measures relating to VOC emissions from tankers and port terminals during loading and off-loading, but on a discretionary basis regarding the port chosen, the size of tankers to be controlled and the effective date of such control. Where a port is designated for the purposes of VOC emissions control, application of IMO safety technical standards will ensure compatibility of the equipment on board the ship and in the port terminal [A/39].

(64) In November 1998 the European Commission stated its intention to proceed with Community rules in accordance with MARPOL regulation 15 to be applied to sea-going ships and ports servicing them. No such regulations have been prepared even in draft.

(65) As at 1998 it would have been reasonable to assume that by about 2004-2006 legislation would be introduced in relation to the emission of VOCs when oil tankers were being loaded with crude oil.

(66) Crude oil is pumped from Kinneil to Dalmeny where there are eight crude oil storage tanks with a total capacity of about four million barrels.

(67) Although the crude oil is treated at Kinneil, then pumped about 19km to a separate storage location at Dalmeny, and then pumped a further 3km to separate tanker berths at Hound Point, these parts of the FPS operate together as a single facility. The MVRS is fully integrated with the pre-existing facilities at Hound Point and Dalmeny. Nevertheless, they are not inter-dependent as tanker loading can, and does, take place even although the MVRS is not operating for one reason or another. Since the installation of the MVRS, the operation of the pre-existing facilities at Hound Point and Dalmeny has not changed significantly.

(68) The principal reasons for developing and installing the MVRS were to allay the concerns and complaints of the local community, to pre-empt legislation of one form or another which might require such a system or one more burdensome and expensive than could be devised and carried into effect voluntarily, and to prevent loss of profit through interruption of loading operations in the face of complaints from the local community. In particular, BP were justifiably concerned that control by the European Union of gasoline emissions might be extended to crude oil. There had been a number of incidents in recent years involving low lying clouds of vapour and malodorous smells, to which the local community had voiced objection. The local community was concerned about the smell and the possible risk to health. These complaints and concerns were voiced notwithstanding that the operations of BP were being lawfully carried out within accepted health and safety parameters. In 1996, according to a BPA Report [A/269-306], the average annual levels of Hydrocarbon emission measured in the vicinity of Hound Point on the north and south sides of the Forth Estuary were extremely low. The average benzene level was similar to that recorded in Edinburgh and less than that recorded for other industrial and urban centres. These benzene levels had remained stable over the three preceding years. On receipt of such complaints, which generally arise because of particular weather conditions, namely light and variable winds associated with high pressure weather systems, BPA usually, but not always, suspended operations.

(69) At the forefront of these reasons were environmental and safety considerations. The underlying principle of the MVRS is to capture vapours, normally emitted to atmosphere, either for safe disposal or for condensation of the vapour back to liquid.

(70) The, or at least one, result of the installation of the MVRS is that when in operation it makes tanker loading operation, which is already environmentally safe, according to current standards, an even safer operation.

(71) The Dalmeny/Hound Point facility is an asset which was used in connection with an oil field at the end of the periods to which the claims which are the subject of these appeals relate. It was then and is a long term asset.

(72) The MVRS is an asset which enhanced the value of the Dalmeny/Hound Point facility.

(73) The MVRS was and is an asset brought into existence and used or expected to be used in connection with an oil field at the end of the periods to which the claims which are the subject of these appeals relate

(74) In the years 1998 and 1999 between about 54% and 100% of the oil loaded onto tankers at Hound Point was the subject of sales at arm's length by BP to third parties.

9. From the foregoing we make the following findings of fact which we consider fall to be inferred from the foregoing findings: -

(1) The marine vapour recovery plant and equipment was brought into existence to be part of the delivery system. It became part of that system, although the pre-existing system can still be operated without it.

(2) The MVRS has the effect of removing and thus permanently separating the gaseous oil, namely the VOCs won from an oil field from other oil so won namely the liquid crude in the tanker's hold.

(3) The expenditure to which these appeals relate has enhanced the value of the Dalmeny/Hound Point Facility. That Facility is not a mobile asset but a long term asset within the meaning of Section 3(8) of the Oil Taxation Act 1983 as amended.

Discussion of the Evidence

10. We make no attempt to consider and assess all the evidence in this section of our Decision. We are not required to do so. The result of our consideration of the evidence is contained in our findings of fact. The basic facts were not in dispute. Essentially, Forties blend crude oil is piped from the Forties field onshore to Cruden Bay; from there it is piped to Kinneil by Grangemouth, from there, it is either pumped to the refinery at Grangemouth or to Dalmeny; from Dalmeny it is pumped to Hound Point where it is pumped on board the vessels. The Hound Point terminal was expanded to include facilities for extracting and compressing VOC's given off in the loading process. The VOCs are processed at Hound Point, then piped to Dalmeny, where they are further processed by the MVR plant installed there. Gas is extracted and used for various purposes. Crude oil is extracted too and recycled into the system and in effect returned for delivery with the Forties blend to the oil tankers loading at Hound Point.

11. In our findings of fact we have endeavoured to set forth a more technically accurate and elegant version of the preceding paragraph. In doing so, we have relied heavily on the Report prepared by Peter Jones [A/48 and following]. Mr Jones gave evidence and was subjected to cross examination. At the end of the Hearing, counsel intimated that they would be able to identify the parts of Mr Jones' report on which they were agreed in order to make it easier for us to make findings of fact. In the weeks before the Hearing we gave parties strong encouragement to produce an agreed statement of facts. In the event, the parties have not been able to agree precisely what parts of Mr Jones' report should be included in our factual findings, and no statement of agreed facts was ever produced. This is unfortunate as it could have saved Hearing time and eased our burden considerably, particularly as there was much technical detail about which there could be no significant dispute whatsoever. We have therefore simply made our own assessment of the facts in the usual way. As can be seen from our findings, the evidence was such that we could not accept all the factual

statements contained in the report prepared by Mr Jones. Some modification has been required as a result of the other evidence led.

12. As to the evidence, Graeme Stewart of the BP Amoco Group of Companies' (BPA) was the manager of a multi-million dollar polyethylene plant development project at Grangemouth. He had previously been the project manager for the MVR plant at Dalmeny/ Hound Point. He provided a general description of that project, its installation and operation. Christopher Hedley has been employed by BPA for about 32 years. Between 1994 and 1997, he was manager of BPA Forties Pipeline System. He was involved in the financial aspects of seeking Board approval for the capital expenditure on the MVR project and spoke to these matters and the reasons underlying the decision to proceed. It was put to Mr Hedley, under reference to a manuscript addition to confidential BP documents dated February 1996 [A/70 A/90-96 especially at 95], that the documents indicated that the project was being presented as a safety issue, and that this was being done for tax purposes. This line was not accepted by Mr Hedley in evidence, and although the cross examination raised our suspicions (see also Data Sheet A92 at A/95 prepared by Mr Burt), we have not found sufficient material in the evidence to persuade us that the line of cross is well founded. We have therefore made no finding of fact supporting this line.

13. Mr Burt has been employed with BPA since 1988. Between November 1993 and January 1997 he was a business analyst for BPA's Forties Pipeline System Business Unit based in Aberdeen. He described how a Financial Memorandum dated March 1996 came to be produced. He did not speak to the contents of the Memorandum and it was not identified. Mr Joyner has been with BPA since 1979. He has been the manager of Dalmeny/Hound Point since 1994. He explained the operations undertaken there. The thrust of his evidence was that they were a fully integrated facility amounting to one operation, although the MVRS has had teething problems since it became operational in about mid December 1998. He stressed that safety was the driving force behind the MVRS project. Mr Millar has been with BPA since about 1981. He is presently the Process Engineering Design Leader within the Projects Department at BPA's complex at Grangemouth. Between September 1995 to December 1997, he was Engineering Manager for the MVR project. He described the constituents and origins of the gases which are evolved and displaced from the holds of tankers during crude oil loading operations. Mr Warshaw gave evidence in place of David Woods, who produced the Report at A/27 and following. This Report considers the development of the regulation of the emission of VOCs at terminals where crude and refined products are loaded. It also considered the question whether the MVRS at Hound Point/Dalmeny could properly be regarded as an integral part of the overall hydrocarbon transportation and loading systems with which it is associated. Unfortunately, at the time of the Hearing, Mr Woods was apparently being held against his will somewhere in Libya. Mr Warshaw is self employed. He has an ONC in mechanical engineering dating from 1960. He has held a variety of jobs in the oil and gas industry including project management and fiscal metering. He has carried out professional services for Mr Woods' firm on a number of occasions and collaborated with Mr Woods in the preparation of the report mentioned above. One of Mr Warshaw's interests was monitoring legislative activity in the oil and gas industry. He contributed and spoke to paragraphs 4 to 14 of the Report prepared by Mr Woods' firm DJW Woods Associates, Engineering Consultants, Knutsford, Cheshire, which concerned the regulatory background.

14. Mr Jones gave evidence for the Revenue. After graduating in 1970, Mr Jones worked in the oil industry in various roles for different oil companies. In 1985, he joined Gaffney Cline & Associates, an internationally based petroleum consulting

company. He produced a detailed Report (A/49 and following) in which he describes the nature and operational aspects of the MVRS in the context of the FPS; he describes the various items of equipment and the processes involved.

15. The information about arms-length sales at Hound Point has been taken from a letter from BPA dated 11/4/2000. There was some dispute about this at the Hearing; it appears that the parties now agree the figures in our finding of fact No. 74.

Submissions.

16. BP's primary submission (through Mr Aaronson) was that the creation, construction and operation of the MVRS enhanced the loading facility at Hound Point, and made it a better or more valuable loading facility. It was an integral part of the loading facility. The Dalmeny and Hound Point operations comprise a single asset or facility; organisationally, operationally and functionally, they constitute a single unit; it was a quirk of geography that they are physically separate. He relied inter alia on the evidence of Mr Jones, who (in an answer given during cross-examination) expressed the view that as currently configured and staffed the installation was integrated; Mr Jones also stated that the MVRS and the other facilities at Dalmeny/Hound Point were not interdependent. Mr Aaronson also referred us to various parts of the MVRS Operating Manual. Even if there were two separate assets, each was enhanced by the MVRS. As a variant of that primary submission, he submitted that even if the MVRS did not enhance its value, the MVRS itself was an asset brought into existence and itself entitled to relief. Mr Aaronson emphasised that the fact that BP expended about £60m demonstrated that the installation of the MVRS was not a mere public relations exercise. BP were reasonably apprehensive that they would in due course be required as a result of international regulation or national legislation to install a MVRS. Expenditure which reasonably anticipated regulations must have had the effect of enhancing the value of the loading facility.

17. BP's second main submission was that the sole purpose of the expenditure was to enable oil to be safely loaded into the tankers. Mr Aaronson referred us to section 3(1) of the 1983 Act read with sections 12(2), 3(1)(g) and 12(1) of the 1975 Act. Although operations prior to the installation of the MVRS had been regarded as safe, in the nineties there was an apprehension that the operations contributed to the low level ozone and that constituents which were toxic, such as benzene, were being released into the atmosphere. A process which had the purpose of eliminating such compounds from the atmosphere is a process which enables the oil to be loaded safely, that is to say without risk or fear of harm to the surrounding community; the risk was not confined to explosion or suffocation. He submitted that BP had two principal concerns; the first was the elimination of risk ie reducing the risk of release of such constituents into the atmosphere to infinitesimal proportions, well below national requirements; the second was to avoid apprehension on the part of the local communities. Here, the MVRS subjects the oil to a process to enable VOCs to be given off and extracted. Safety should be given a broad interpretation and includes safety to the vessel, the operators and to the community. In particular, the statute should be interpreted in the light of technological and scientific developments which have occurred since the passing of the legislation. Reference was made on this point to *Nationwide Access Ltd v CCE* 14/2/00 (unreported), *Dyson J* pages 7-8. Any additional income through the recapture of VOCs was incidental to the technology deployed to prevent the VOCs escaping into the atmosphere. The decision to install the MVRS was dictated by environmental and not financial grounds Mr Aaronson relied on inter alia a number of documents to be found in the Bundles

at F10-13, F16,17-19, F22-3, D9,F 70,71-2 and 75-6, F416-420, F77, F79 and 87, F135,139-141, F170, 173-176, 181-185, F252 and 259, F278 and 280 and A99-102. These documents were not discussed in detail in the evidence. In response to certain contentions advanced by the Revenue, he submitted that the fact that the MVRS operates beyond the metering point was irrelevant because the metering point could be anywhere; and on this argument parties could by contract elide the statutory provisions. The particular location of the metering point was simply a matter of convenience. Loading took place beyond the metering point. The point where property passed was also irrelevant to the statutory criteria as it could by agreement be stipulated to be anywhere eg after loading is complete or before the Kinneil type stabilisation. The fact that the MVRS re-injects the extracted VOCs into the crude that is about to be sold has no bearing on the statutory criteria, inter alia because the point would not arise if incineration had been chosen; it would seem to be absurd if the method of dealing with the VOCs determined whether the expenditure was allowable.

18. BP's third main submission was that the expenditure was incurred for the purposes of the initial treatment of the oil won from the field, namely the separation of gas, all within the meaning of section 3(1) of the 1983 Act and sections 12(2), 3(1)(g) and section 12(1)(b) of the 1975 Act. While most of the gas is extracted at Kinneil, most of the remainder is removed by the MVR equipment. The purpose of the MVRS was to extract or remove and thus separate VOCs, which are gaseous oil, from the liquid crude as the crude is loaded into the ship's tank. Although the VOCs are subsequently introduced into the crude oil stream at Dalmeny, this does not matter. In fact, this was done in order to avoid the environmental impact which would otherwise have arisen from the incineration of the VOCs, which would have been the alternative method of dealing with the VOCs'. This alternative method was rejected on environmental grounds.

19. Definitions (c) and (d) did not apply. The exclusion of deballasting was necessary because it would otherwise have been included in definition (a), of initial treatment, in section 12(1)(a) of the 1975 Act. There were two methods of ballasting, namely the old method known as dirty ballasting, whereby water is pumped into the vessel's storage tanks and thus mixed with any residue of oil; and clean ballasting, where a vessel has separate ballast tanks.

20. The fourth main submission for BP was that the expenditure was incurred for the purpose of disposing of the oil within the meaning of Section 3(1)(h) of the 1975 Act. Disposing includes the cost of physical disposal. At least some of the oil was disposed of at arm's length. That was sufficient. It did not matter that oil was also disposed of in transactions that were not at arm's length.

21. Mr Aaronson also submitted that the expenditure was incurred for the purpose of transporting the oil within the meaning of section 3(1)(f) of the 1975 Act; loading the oil at Hound Point fell within the meaning of transportation. The Dalmeny/Hound Point delivery system, as he described it, was, before the installation of the MVRS, an asset expected to be used for the purpose of transporting oil to the place in the United Kingdom at which the seller in a sale at arm's length could reasonably be expected to deliver it. The only real issue on this branch of the argument, according to Mr Aaronson, was the question of enhancement.

22. In relation to each of these main submissions, the fact that the vapour emanates after delivery is irrelevant; this does not prevent the extraction process being part of the loading process, being carried out for safety reasons, being

related to disposal or separation. Likewise, the point at which property in the oil passes does not affect the issue. The statutory language referred to the place of delivery rather than the point of delivery and was deliberately vague.

23. Mr Aaronson made a number of broad submissions in relation to the scheme of the legislation. The 1975 Act introduced a special tax regime for North sea oil. It was a cash flow based tax.

24. There was no doubt that paragraphs (b) and (c) of section 3(1) of the 1983 Act were satisfied (the MVRS being a long term asset, which is not a mobile asset and whose life continues beyond the end of the relevant claim period). The reference in section 3(1)(a) of the 1983 Act to use in connection with the field takes one to section 12(2) of the 1975 Act. Use is there related back to one or more of the purposes specified in section 3(1) of the 1975 Act (except section 3(1)(b) which relates to licence payments to the Secretary of State). The approach to the statutory scheme was to ask whether the asset is used for any of the purposes in section 3(1) of the 1975 Act. Section 3(1) of the 1975 Act was plainly intended to cover the operation and exploitation of an oil field, from one end of the pipeline to the other, from birth to death and included reclamation. It should be construed as including all activities, thus avoiding anomalous gaps. Loading was not expressly included but must be deemed to be included in either section 3(1)(f) (transportation) or (h) (disposal) of the 1975 Act.. Where there is to be a limit on allowable expenditure the statutory scheme specifies the limitation; this can be seen from section 3(1)(hh) amplified by section 3(5B) of the 1975 Act.

25. Mr Brennan, for the Revenue, began by reminding us of the statutory background to the claim. He submitted that when examining whether expenditure incurred in acquiring, bringing into existence, or enhancing the value of an asset for use in connection with an oil field is allowable under section 3 of the 1983 Act, the question is whether the asset is used in connection with that oil field for at least one of the purposes specified in section 3(1) of the 1975 Act; the relevant purpose is that for which the asset is used, not that for which the expenditure is incurred. He then considered the relevant uses relied upon by BP. He relied upon the phrase sole purpose in the definition of initial treatment and submitted that a process with mixed or dual purposes was thereby excluded. More generally, he submitted that the cut-off point for the charge to PRT is the place of delivery of oil. In substance, this is the point of fiscal valuation. This takes place before the oil leaves the loading boom and thus before the oil reaches the flange on the ship/shore connection point; the flange is generally the point, in accordance with industry practice, at which property and risk passes to the purchaser. In summary, his submissions were that:

(1) the hydrocarbons within the recovered tanker waste are not oil won from the field at the time the VOCs are subjected to the processes of the MVRS;

(2) Dalmeny/Hound Point does not constitute a single asset; and

(3) the use of the MVRS does not constitute transport, initial treatment or disposal for the purposes of section 3(1)(f), (g) and (h) respectively of the 1975 Act.

26. In relation to submission (1) Mr Brennan argued that BP had to show that the recovered vapours constituting VOCs, together with inert boiler flue gas, were oil won from the field. The substances must have been won under the authority of a licence under the 1934 Act. Having regard to the overall structure of the tax, the

VOCs are not oil won from the field, because oil does not retain its historic character as oil won from the field after the point of delivery. The phrase does not include vapours recovered downstream, treated and reinjected into the system. The VOCs or at least some of them have already been charged to PRT being within oil delivered to the vessel which has already passed through the fiscal metering system. For that reason the Revenue do not regard VOCs as chargeable to PRT. Moreover, VOCs are not recovered from oil's natural condition in the strata. There was no physical process involved in separating the VOCs from the oil.

27. As to submission (2), Mr Brennan argued that Dalmeny/Hound Point should not be regarded as a single asset or even two assets, but rather a number of separate assets such as tanks fire systems, booms, pumps, pipes etc. The MVRS did not enhance the value of any identifiable asset. It was an investment in functionally distinct and substantial new assets. The loading operation carries on as before; the function of the MVRS is to clean up afterwards. It was a new and functionally separate operation even although there was an element of centralised computer control. We were referred to *Philips v Whieldon Sanitary Potteries Ltd* 1952 33TC 213 and to *Brown v Burnley Football & Athletic Co. Ltd* 1980 53TC 357. If the Hound Point /Dalmeny facilities fall to be treated as a single asset including the MVRS, then the Revenue accepts that that single asset has been enhanced in value by the addition of the MVRS.

28. The first part of submission (3) relates to the incurring of expenditure for the purposes of transporting the oil as set forth in 3(1)(f) of the 1975 Act. The basis of it was that the VOCs arise and are recovered after delivery, after the point of valuation for PRT purposes, and after the transfer of risk and property to the purchaser. The recovery of gases after delivery, their subsequent processing and re-injection cannot fairly be said to be part of the process of transportation of oil within the meaning of section 3(1)(f). Place was precise and meant the ship/shore flange connection, because the cost of transport was potentially significant.

29. The second part of submission (3) relates to the incurring of expenditure for the purposes of the initial treatment of the oil won from the field as set forth in section 3(1)(g) and 12(1) of the 1975 Act. Mr Brennan began by considering paragraph (a) of the definition of initial treatment in section 12(1) quoted above. He submitted that there was more than one process involved and the sole purpose test, as he described it, was not met. As to the process, there were many processes such as the collection of vapours, compression of the vapours for transportation, the transportation of those vapours from the point of delivery to Dalmeny, the separation of the hydrocarbons from boiler flue gases, removal of liquids in the knockout drum, separation of water, liquids and gases, the recovery of hydrocarbons from the kerosene stream for resale, and the reinjection of the recovered hydrocarbons into the Forties Pipeline System. As to the question of safe loading, only the actual collection of the vapours could fall within the definition of a process the sole purpose of which is to enable the oil to be safely loaded. Even if there were only one process, it cannot be said that its sole purpose was safe loading. Here, there were wider business purposes such as pre-empting what might otherwise be onerous statutory regulation, and the improvement of BP's public relations and standing in the local community. We were referred to *Mallalieu v Drummond* (1983) 57 TC 330 and *Vodafone Cellular v Shaw* (1997) 69 TC 376 for the proposition that purpose is not limited to what the taxpayer says he wishes to achieve. The Revenue also argued that the MVRS did not separate oil won from the field within the meaning of section 12(1)(c) of the 1975 Act. What the system did was to collect from the ship's manifolds

vapours that had already been separated as result of the loading process. Such separation takes place whether or not the MVRS is operating. The fact that deballasting was expressly excluded from the definition of initial treatment does not assist the Appellants. Deballasting includes the provision of substantial storage for the purpose of separation of sea water from usable oil by gravity separation. An express exclusion of one process does not mean that a process [or processes to be consistent with earlier submissions] such as the MVRS must be within the definition of initial treatment.

30. Finally, Mr Brennan turned his attention to section 3(1)(h) of the 1975 Act (disposal of crude in sale at arm's length). This, he submitted related to the costs of sales such as commission or other contract costs. One must identify a particular disposal at arm's length before any question of relief on the costs of disposal can arise. The whole of the MVRS is not used for the purposes of disposing of oil. Nor is the whole of the oil loaded disposed of in sales at arm's length.

DISCUSSION AND DETERMINATION OF ISSUES

31. Although the factual background is somewhat complex, our findings of fact make the resolution of the issues more straightforward than they might otherwise have

been. It is convenient, in relation to each of BPs main submissions to identify the statutory criteria which have to be met, then to consider their proper construction and

finally to consider whether the findings of fact we have been able to make satisfy us that BP have brought themselves within the relevant parts of the statutory criteria.

32. There is no doubt that expenditure was incurred by BP at the relevant time as a participator in an oil field. Whatever may be the true scope and extent of the asset or assets under consideration in this appeal, they cannot properly be described as mobile assets. Rather they are or it is a long term asset. That is to say we are dealing with an asset or assets the useful life of which continues after the end of the claim period in which it is first used in connection with the oil field in question. There was no discussion about claim periods or any dispute whether first use fell within section 3(8) of the 1983 Act. We do not therefore consider these matters, which were not in dispute, further. We should also add at this stage that we consider that the oil under consideration to which section 3(1)(f), (g), and (h) refers includes oil won from a field in which BP is a participator. The argument that oil does not retain its historic character as oil won from the field after the point of delivery arises in relation to section 3(1)(g) in relation to safe loading and separation. In our view, the emission of the VOCs is part of the overall delivery process, as more fully discussed below. Accordingly the oil is still oil won from the field for the purposes of section 3(1)(g).

Whether expenditure incurred in bringing into existence or enhancing the value of an asset

33. The next question to consider is whether the expenditure was incurred in bringing into existence an asset or enhancing the value of an asset: see section 3(1) of the 1983 Act. (We note in passing that section 3(2) is not relevant for present purposes.) We consider that whether an asset is brought into existence is a question of fact. Likewise, whether the value of an asset is enhanced is

essentially a question of fact, although expert opinion evidence on matters of valuation might be relevant. We heard no such opinion evidence. As disclosed in the findings of fact the MVRS involved the addition to the Dalmeny/Hound Point facility of a number of items of plant and equipment and the incorporation of a number of processes. Our findings of fact lead us to conclude that the facilities at Dalmeny and Hound Point are integrated and are properly to be described as a combined facility, as discussed below. While it could be said that the individual component parts of the MVRS, i.e. the plant equipment and pipework, constitute assets brought into existence, we consider that the preferable approach is to consider the MVRS as a whole. It is difficult to describe the MVRS as a separate or severable asset from the Dalmeny/ Hound Point facility. In a practical sense, the MVRS could not be sold separately. It could not be bought as a system and installed. It was very much a bespoke system tailored to the needs of the processes being carried on at Hound Point and Dalmeny. Although we consider the point to be a relatively narrow one, we do not consider that expenditure has been incurred in bringing into existence an asset within the meaning of section 3(1) of the 1983 Act. Rather, we are of the opinion that the expenditure incurred in relation to the MVRS enhanced the value of an asset. That asset is the Dalmeny/Hound Point facility.

34. We accept the argument that the Dalmeny/Hound Point facility falls to be treated as a single integrated asset i.e. a unum quid. This expression is more commonly found in rating and valuation law. We heard no evidence or submissions on how the facility is treated for rating and valuation purposes. This might have cast some light on the proper approach to the issue whether Hound Point and Dalmeny are regarded for other statutory purposes as a single asset. Nevertheless, we consider that the facts point strongly in favour of the conclusion that the Dalmeny/ Hound Point facility falls to be treated as a single asset for the purposes of section 3(1) of the 1983 Act. In summary, they are part of an integrated facility the purpose of which is to receive crude from the FPS and deliver it elsewhere.

35. We have already indicated our conclusion that the MVRS has enhanced the value of an asset. Our reasons now follow. The value of an asset will be enhanced if, in some way, it is made more valuable. Increase in value can be achieved in a number of ways and can be viewed from a number of different perspectives. Expenditure resulting in the addition of plant and equipment rendering the asset more productive or efficient and thus more profitable may be said to enhance the value of the asset. This may enhance the market value. But the value of an asset could also be enhanced purely from the owner's point of view. Value to owner is a concept firmly based in compulsory purchase law in the early part of the last century. The owner might incur expenditure in making his asset more environmentally friendly, something to which he alone among commercial operators attached great importance. That expenditure would enhance the value of the asset so far as the owner was concerned. As to value, there was no expert evidence on value. However, we are prepared to conclude on the evidence as a whole that the MVRS is bound to enhance the value of the Dalmeny/Hound Point facility. It probably anticipates legislative control of the emission of VOCs in the context of oil; it appeases the local community and improves the overall safety of the operations at Hound Point (a point to which we shall return below). Even although the MVRS has had a number of teething troubles and does not yet operate continuously, we consider that there can be little doubt that the MVRS enhances the value of an already large and valuable asset.

36. We reject for present purposes the Revenue's argument that the expenditure on an MVRS was an investment in functionally distinct, substantial new assets.

Although the MVRS could be said to be functionally distinct, it operates or can operate along with and as part of the overall delivery process. That delivery process is designed to minimize harm to the environment. If anything the Revenue argument supports the assertion that the expenditure brought into existence an asset within the meaning of section 3(1) of the 1983 Act. We note that in Philips the issue was whether expenditure, incurred for the construction of a concrete and iron barrier or embankment to stop water from an adjoining canal seeping into the factory buildings and affecting taxpayer's manufacturing process, was of a revenue nature and so deductible under Schedule D in computing the taxpayer's profits, or whether it was capital expenditure and so not allowable. The Commissioners held that the barrier replaced the old one and the expenditure was therefore deductible. In the High Court it was argued for the first time that the expenditure amounted to a repair. Donovan J discussed earlier authority where a distinction had been drawn between replacement of a subsidiary part of the taxpayer's premises and replacement of the entirety. His Lordship considered the matter to be one of fact and degree and he took the view that it was not proper to regard the new barrier as a repair to the old one; in reaching that conclusion he had regard to the function, size and importance of the barrier. In concluding that the expenditure was capital, he took into account the extent of the work, the permanent nature of the new barrier, its benefit to the preservation of the fixed capital of the business and that it was essential to enable the taxpayer to trade. Nothing in that decision, as we read it, requires us to conclude that, in the context of section 3(1) of the 1983 Act, the expenditure on the MVRS, which as we have already concluded is integrated into the Dalmeny/Hound Point facility and functions as part of the facility, was not incurred in enhancing the value of an asset, i.e. the facility.

37. In the Burnley Football case, the principal issue was whether expenditure on replacing a stand on the club's football ground was a repair of the premises and so allowable expenditure in computing the club's taxable profits or even if a repair must, nevertheless, be regarded as non-deductible capital expenditure. The Special Commissioners found in favour of the taxpayer. In the High Court, Vinelott J reviewed the authorities and emphasised that different factors may operate with varying degrees of weight, depending on the circumstances of each case; there was no universal test. His Lordship, differing from the Commissioners, took the view that the erection of the new stand was not a repair. This was because the stand was a distinct part with its own distinct function; the stand could not, therefore, be said to be part of the larger entity. The facts of that case are, we think, too remote from the present circumstances to be of any real assistance. If anything that case supports BP. In the light of our conclusion that the MVRS is an integrated part of the facility, it would follow that it was part of the larger entity. To describe millions of pounds of plant and equipment operating as a MVRS in conjunction with pre-existing facilities as neither an asset nor the enhancement of an existing asset seems, on the strength of our findings, to fly in the face of common sense. We therefore reject this submission and hold that the MVRS amounts to an enhancement of the Dalmeny/Hound Point facility. Standing our findings of fact, no other conclusion can be reached.

38. Even if we were wrong in concluding that the expenditure was not incurred in bringing into existence an asset, we observe, nonetheless, that the same expenditure could be incurred in both bringing into existence an asset and in the enhancement of an existing asset. Take, for example, the illustration which we canvassed with the parties in the course of the hearing. The owner of a cylinder lawnmower buys and attaches to it a bucket for collecting the grass the lawnmower cuts. The bucket is an asset. It could be sold in its own right. It is integrated with the lawnmower; the lawnmower and the bucket operate together, although the lawnmower can operate adequately without the bucket. Together,

they operate more efficiently and perhaps as a unit are more valuable than the sum of the value of the lawnmower and the bucket individually. If the owner were to sell the lawnmower, he would probably receive more for it if he sold it with the bucket. The expenditure incurred on the bucket has enhanced the value of the lawnmower in the same way as expenditure on new cutting blades would do. The expenditure, too, has brought into existence an asset, namely the bucket. The analogy may not be perfect but we consider it to be adequate to demonstrate that there at least can be no real doubt that the MVRS enhanced the value of the Dalmeny/ Hound Point facility. In any event, once the conclusion has been reached that the Dalmeny/Hound Point facilities, including the MVRS, fall to be treated as a single asset, it is accepted by the Revenue that the asset has been enhanced in value by the addition of the MVRS.

Use in connection with the field

39. The next question to consider is whether the asset is being or is expected to be used in connection with the field. Section 15(5) of the 1983 Act requires us to construe that Act as one with Part I of the 1975 Act. By virtue of section 12(2) of the 1975 Act, any reference to the use of an asset in connection with an oil field is a reference to its use in connection with that field for one or more of the purposes mentioned in section 3(1) of the 1975 Act (excluding section 3(1)(b)). The first purpose relied upon by BP was the initial treatment of oil won from the field, and in particular that part of the definition of initial treatment in section 12(1) of the 1975 Act which relates to subjecting the oil won from the field to a process of which the sole purpose is to enable the oil to be safely loaded into a tanker.

Initial treatment : enabling oil to be safely loaded

40. It is plain that the Dalmeny/Hound Point facility as enhanced by the MVRS is being used in connection with one or more oil fields. The oil transported from Cruden Bay down to Dalmeny and onwards to Hound Point is subjected to a variety of processes. We agree with the proposition that the sole purpose test is directed to the process. The process under consideration is the MVRS.. The purpose or *raison d'être* of that system is to prevent VOCs being released into the atmosphere. It is true that the VOCs are released immediately after the oil is loaded into the tanker. However, in our view it is too narrow an approach to say, as the Revenue submits, that the process of recovery is not part of the safe loading process. The consequence of the release of VOCs is that they have to be dealt with; essentially they are now recycled, with other gases given off in that process being used for one function or another. All this is a necessary concomitant of the process of capture immediately following the deposit of the oil into the tanker. Does this process of capture enable the oil to be safely loaded within the statutory meaning? We consider that it does. Safety is a broad concept. What is safe for one generation may no longer be safe for the next. Greater care is taken. In recent decades greater emphasis has been placed on the safety of employees and and the prevention of activities which may be harmful to the environment and general human health. These are wider aspects of safety but nevertheless relate to safety. A loading process which emitted significant quantities of toxic or carcinogenic fumes or substances into the atmosphere could hardly be regarded as a safe loading process. Expenditure which reduced or eliminated the risk of harm to employees or human health generally must be regarded as having as its purpose the safe loading of oil. Safety is a relative concept. We see no reason why expenditure which makes an apparently safe process even safer should fall outwith the meaning of safely loaded, particularly where the expenditure is incurred in anticipation that what has hitherto been

regarded as a safe process may no longer be so regarded. This approach is consistent with the updating approach to statutory construction (See Fitzpatrick *Sterling Housing Association Ltd* [1999] 4 All ER 705 at 726, *Nationwide Access Ltd* and *Anr v Commissioners of Customs and Excise*, supra). The evidence discloses that the driving force behind the expenditure was safety in the broadest sense. The consequence was that the concerns of the local community were met. However, we do not accept that the whole project was simply part of a public relations exercise dressed up to fall within the scope of statutory provisions under consideration for the purposes of obtaining relief.

41. Can it be said that the process to which the oil was subject had as its "sole purpose ... to enable the oil to be ... safely loaded" (see definition (a) of "initial treatment" in section 12(1) of the 1975 Act)? We have already observed that the word "purpose" is there used in relation to the process. We therefore have to determine whether the one purpose the MVRS is designed to achieve is safe loading. For the reasons given in paragraph 40, we think that was the position.

42. Even if we were concerned with the purpose of BP in installing the MVRS our conclusion would be the same. In *Vodafone Cellular v Shaw*, supra, Millett LJ identified the principles to be applied in determining whether expenditure had been laid out wholly and exclusively for the purposes of a taxpayer's trade. He stressed that it was necessary to discover the taxpayer's object in incurring the expenditure and this normally called for an enquiry into his intentions; and that object was to be distinguished from the effect of the expenditure. Moreover, on the strength of the *Mallalieu* decision, the taxpayer's intentions were not limited to the conscious motives that were in his mind when he incurred the expenditure. With those principles in mind (and assuming that BP's intentions are relevant to the issue) our conclusion from the evidence is that BP's sole purpose in installing the process was to enable the oil to be safely loaded. We recognize that the incurring of the expenditure was in anticipation of possible onerous regulations and that it improved BP's public relations and standing in the local community. But those were matters taken into account by BP as effects of the expenditure. In our view there was no subconscious "*Mallalieu*" purpose.

43. Our conclusion is that BP have brought themselves within this part of the definition of initial treatment and are therefore entitled to succeed in this appeal.

Initial treatment : whether used for separating oil

44. BP also rely on another part of the definition of initial treatment, namely separation of oil consisting of gas from other oil won from the field. At least some oil is won from the Forties field which is subject to the MVRS. It does not seem to us to matter that oil won or even the majority of the oil won is won from non BP fields. The evidence disclosed that the separation or the creation of the vapour out of the oil loaded into the tanker occurs because of the loading process itself. The MVRS does not cause the vapour to arise. The vapour is present principally as a consequence of the loading operation even if the MVRS is not functioning for one reason or another. What the MVRS does is to remove the vapour which has arisen from the oil which has been loaded into the tanker. Is the act of removal within the scope of separation in the context of the emission of VOCs during the loading process? In our view, it probably is, although we consider the point to be a narrow one. In the present context, the removal or recovery of the VOCs is the completion of the separation process and therefore part of it. The separation process is completed by the permanent removal of the VOCs from the hold of the tanker into which oil has been loaded. It can therefore properly be said that one of the purposes of the expenditure was the initial treatment of oil won from an oil

field, namely the separation of the gaseous vapour from the liquid crude oil. That is sufficient to enable the appellant also to succeed on this ground. We should also indicate that we found the discussion about deballasting in the context of this argument to be of little assistance to us.

Whether used for disposing of oil

45. BP also argue that they can bring themselves within section 3(1)(h) of the 1975 Act. The argument turns on the meaning of disposing of any oil. In our view expenditure incurred for the purpose of disposing of crude in sales at arm's length does not cover the physical or other costs of delivery, otherwise the provision would be so wide that there would be little point in having the elaborate statutory structure with its variety of purposes which attract relief; virtually all expenditure would be caught by this provision and other provisions would become redundant, such as the safe loading and separation purposes; they could be subsumed within the costs of disposal if a broad meaning were to be given to disposing. We consider therefore that disposing should be restricted to costs incurred in relation to the sale at arm's length such as legal or administrative costs rather than costs incurred in putting the oil into a deliverable state, or the costs of protecting the environment when oil already sold is delivered. There must be an arm's length sale for this provision to bite. The evidence discloses that a significant proportion of the disposal of oil was not at arm's length. That may not matter if one of the purposes of the expenditure was for disposing of oil in sales at arm's length. Nevertheless, although expenditure may be incurred for one or more of the statutory purposes, we consider that expenditure incurred to enable the oil to be safely loaded is not also expenditure incurred for disposing of the oil in arm's length transactions. The true purpose of the MVRs was the elimination of VOCs from the atmosphere which occurred as a result of the loading process, whether or not that loading process was part of a disposal in an arm's length transaction. We therefore find against BP on this particular branch of their case.

Whether used for transporting oil

46. BP also relied upon section 3(1)(f) of the 1975 Act, namely expenditure incurred for the purposes of transporting the oil to the place in the United Kingdom at which the seller in a sale at arm's length could reasonably be expected to deliver it. The short point here is that the pre-existing Dalmeny/Hound Point facility was used for the purposes of transporting the oil to the place at which the seller in a sale at arm's length could reasonably be expected to deliver it. That being so, the only issue was whether the expenditure was incurred in bringing into existence or enhancing the value of that facility. The fact that the expenditure was incurred on the MVRs and the MVRs operated at least in part downstream of the point of delivery, or even after risk and/or ownership passed to the purchaser, is of no moment because the enhanced asset is nevertheless used inter alia for the purpose of transporting the oil. The enhanced asset is the Dalmeny/Hound Point facility plus the MVRs and not just the MVRs. The enhanced facility remains inter alia a transportation facility. On this argument, too, therefore, BP succeed.

47. For the foregoing reasons, we allow the appeals against the decisions referred to in paragraph 8(1) above. We leave the amounts of tax at stake to be determined.

J GORDON REID QC
STEPHEN OLIVER QC

Released: 5th July 2000

SC 3053/99