



CYNGOR DOSBARTH
**PRESELI
SIR BENFRO**

**PRESELI
PEMBROKESHIRE
DISTRICT COUNCIL**

Your Ref
My Ref RGS/DAB
Please ask for Mr. R.G. Spate
Extension 203
Date 21st December, 1990

For the attention of Mr. J. Everett

Elf Oil (G.B.) Limited,
Roboston Refinery,
P.O. Box 10,
Milford Haven,
Dyfed. SA73 3JD

- Dear Sirs,

Land Farming - Waste Disposal Licence

I have pleasure in enclosing for your attention the Waste Disposal Licence in respect of the proposed land farming of oily wastes.

Please note that the licence in its entirety includes all of the following:-

- (i) The licence
- (ii) Appendix A - which is the schedule of conditions
- (iii) Appendix B - which specifies various sampling and analytical techniques
- (iv) The Working Plan - which for the purpose of this licence includes the attached submission by Messrs. Biotreatment Limited entitled - Landfarming: A Method For The Disposal Of Oily Wastes; together with the plans and drawings numbered PS74/1, PS74/2, PS74/3, PS74/4 together with the location plan numbered M 98 - 0/004533.

I look forward to the success of this operation.

Yours faithfully,

D.C. Lee
Principal Environmental Health Officer

**CONTROL OF POLLUTION ACT 1974
PART I**

WASTE DISPOSAL LICENCE

THE * **Preseli Pembrokeshire District Council**
HEREBY GRANT a Waste Disposal Licence, pursuant to an application dated
6th June, 1990, in respect of the following:

Full name and address of licence holder	Elf Oil (G.B.) Limited, P.O. Box 10, Milford Haven, Dyfed. Tel: (0646) 690300
Full name and address of local representative (if any) of licence holder	Superintendent Env Control & Safety As Above
Location of site to which this licence relates	Land at Milford Haven Identified on Drawing Number M98-0/004533 Attached Hereto
Form of deposit or disposal to which this licence relates	Land Farming of Oily Wastes
Types of waste of which deposit or disposal is authorised and any limitation as to quantity	See Attached Schedule A

This Licence is granted subject to the following conditions:—

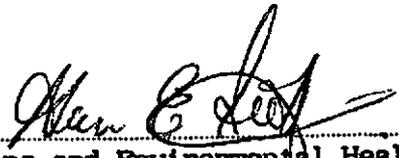
- 1) **SEE ATTACHED SCHEDULE A**
which is the schedule of conditions appertaining to the site and which includes the working plan and identified plans and drawings.
- 2) **SEE ATTACHED SCHEDULE B**
which is the schedule of sampling and analytical techniques to be employed.

Dated

21/12

1990.

(Signed)



Director of Housing and Environmental Health
(Designation)

THE LICENCE HOLDER SHOULD READ CAREFULLY THE NOTES OVERLEAF.

* Insert name of Waste Disposal Authority.

ELF - SCHEDULE OF LICENCE CONDITIONS

1. This licence shall relate to the area of land coloured red on Drawing Number M 98 - 0/004533 of the Working Plan henceforth called "the Site". No deposit of waste shall take place outside the area of land coloured red on Drawing Number M 98 - 0/004533 of the Working Plan.
2. Working Plan shall mean the working statement, hydrological and hydrogeological management statements together with Drawing Numbers of the Working Plan annexed hereto.
3. Disposal Authority shall have the meaning assigned to it in Section 30 (1) of the Control of Pollution act 1974.
4. Duly Authorised Officer shall mean any person authorised in writing by the Disposal Authority pursuant to Section 91 (1) of the Control of Pollution Act 1974.
5. Licence Holder shall mean the person or persons to whom this licence is granted.
6. Biodegradable shall mean material which may be broken down by the action of micro-organisms.
7. Leachate shall mean liquid which seeps through the landfill and by doing so extracts substances from the deposited waste.
8. Bund except for any specified in condition (2) shall mean an embankment of clay, hardcore, bricks, stone, concrete, excavated road materials, subsoil or topsoil, but shall not contain plastics, paper, materials containing asbestos, or containers.
9. Operating shall mean the deposit of waste or acceptance of waste for deposit and all matters incidental thereto.
10. Site Diary shall mean a daily record of all site operations as required and specified in these conditions.
11. The Act shall mean the Control of Pollution Act 1974 as amended.
12. Environmental Hazard shall have the meaning contained in Section 4 (5) of the Control of Pollution act 1974.
13. The type of waste to be deposited at the site shall be as follows subject to paragraph (d).

Hydrocarbon waste materials produced as:-

- (a) A normal part of the refinery day to day operation.

- (b) An emergency operation such as oil spills.
- (c) the result of settling out of oily silts in lagoons, tank bottoms etc.
- (d) No special waste as defined in Section 17 of the Control of Pollution Act 1974 and Regulations made thereunder shall be deposited at the site.
- (e) No deposit of waste which is likely to give rise to an Environmental Hazard as referred to in Section 3 (3) (b) and 4 (5) of the Act shall take place on the site.

14. No waste shall be deposited at the site until such time as the top soil has been sampled and analyses carried out as described in Appendix B for the following elements, compounds and groups of substances:-

- a) pH
- b) Total oil content
- c) Zinc
- d) Copper
- e) Nickel
- f) Lead
- g) Cadmium
- h) Mercury—
- i) Vanadium
- j) Molybdenum
- k) Arsenic

*Soil
analysed*

15. No waste shall be deposited at the site until samples of groundwater have been taken from each of the groundwater monitoring points and analysed for the following elements, compounds or substances as described in Appendix B.

- a) pH
- b) Chloride
- c) Phosphate
- d) Ammonia (ammonium ion)
- e) Nitrate ion
- f) Nitrite ion
- g) Zinc
- h) Copper
- i) Nickel
- j) Lead
- k) Cadmium
- l) Total Organic Carbon
- m) Total Oil Content
- n) Conductivity

*ground
water
analysed*

16. Routine monitoring of the levels of pollutants shall be undertaken as follows:-

- a) Not less frequently than six times in any year samples of soil shall be taken from the site and analysed for the following constituents:-

- a) pH
- b) Total Oil Content

b) Samples of water shall be taken from each of the groundwater monitoring points not less frequently than once per two months and analysed for the following constituents:-

- a) pH
- b) Total Organic Carbon
- c) Conductivity
- d) Ammonium Ion
- e) Nitrate
- f) Total Oil Content

as described in Appendix B.

- 17. Not less frequently than once in each year succeeding the date of this licence samples of the soil shall be taken from the working area of the site and analysed for all of those elements compounds and substances which are named in licence condition number 15.14.
- 18. Not less frequently than once in each year succeeding the date of this licence samples of water shall be taken from each of the groundwater monitoring points and analysed for all of those substances which are named in licence condition number 15.
- 19. The requirements of conditions 17 and 18 shall remain in force for a period of thirty years from the date of the last deposit of waste made on the site under the terms of this licence or until such time as the Waste Regulatory Authority sees fit to issue a Notice of Completion of the site or the said Authority agrees to the cessation of the sampling and analysis regimes.
- 20. The analytical results obtained by virtue of the requirements of licence conditions 14, 15, 16, 17, 18 and 19 shall be made known to the Waste Regulatory Authority, or to the appointed officer of that authority, on demand but in any case on or before the 31st January in any year the analytical results obtained for the period 1st January to the 31st December inclusive of the preceding year shall be made known to the said Waste Regulatory Authority.
- 21. The terms of this licence shall be made known to any person who is given responsibility for the management of this site.
- 22. A record shall be kept of all deposits made at the site. A copy of this record shall be made to the Waste Regulation Authority on demand.
- 23. The licence holder shall notify the Waste Regulation Authority of any proposed change in the conduct of operations affecting the terms of this licence at least one month before the proposed change is implemented.

SCHEDULE OF SAMPLING AND ANALYTICAL METHODS

1. Sampling of Soil

The method of taking a representation sample of the soil contained on the site shall be as follows:-

Twenty five or more core samples all taken to a depth of 25 cms shall be taken from the site and mixed together to form a representative sample. The mixing may be carried out by either manual or mechanical methods.

Sample reduction shall be by means of coring and quartering.

2. Sampling of Sub Surface Water

Samples of groundwater may be taken from the approved monitoring points either by:-

- a) A weighted sampling bottle designed for that purpose.
- b) A pump or vacuum assisted sampling machine.

3. Methods of Analysis

- a) The method of analysis for heavy metals must be carried out following strong acid digestion. The reference method must be by atomic absorption spectrometry.

- b) pH

pH may be determined by using any commercially available pH meter. On the water samples pH shall be determined on the sample as taken. On the soil samples pH shall be determined on an aqueous extract.

- c) Total Oil Content

The total oil content of the soil samples shall be determined by extracting the oil from a weighed dried sample using carbon tetrachloride as a solvent, as described in the Modified ASTM Method D-473 "Sedimentation in fuel oil by Extraction".

The total oil content of the water samples shall be determined by solvent extraction followed by either gravimetric or other suitable agreed analytical method.

- d) Total Organic Carbon

Shall be determined using commercially available apparatus.

- e) Nitrate Content

Nitrate content of the water samples may be determined by means of a selective nitrate electrode.

f) Ammonium Content

Ammonium content may be determined by means of a selective ammonium electrode.