



PERMIT


**WORKING
PLAN**



OUTGOING

Texaco Limited - Pembroke Plant

EH&S Department: Landfarm Working Plan

Approved:  (EH&S Team Leader)	Approval Date: 4/8/96
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Notes: This document is a complete re-issue of the previous version (issue A)

Document holders must ensure that obsolete issues are destroyed or clearly marked as obsolete.

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Site plan 50-AA-653

1. **References:**

- 1.1 Licence for Landfarming of Oily and Biological Sludges. (refer to EH&S Team.)
- 1.2 SPI 7.025: Waste Disposal (refer to SPI folder or Electronic Filing System).
- 1.3 SPI 7.026: On Site Waste Disposal (refer to SPI folder or Electronic Filing System).
- 1.4 Environment Work Instruction: Landfarm sampling (held by EHS Team)
- 1.5 ICRCCL Guidance note 59/83.
- 1.6 MAFF Code of Good Agricultural Practice for the Protection of Soil.
- 1.8 80/68/EC Groundwater Directive (refer to DoE guidance documents).

2. **Introduction:**

This document sets out the detailed requirements for the landfarming of waste material on the Pembroke Plant site in accordance with the licence (ref: 1.1).

3. **Working Plan**

3.1 **Site Infrastructure:**

3.1.1 **Locations:**

Texaco Drawing 50-AA-653 (attachment 1) identifies:

- (a) The Landfarm Plots covered by the licence (shown in yellow).
- (b) Sludge holding areas.
- (c) Landfarm drainage (shown in green).
- (d) Contract vehicle storage (block 56)
- (e) Site control office (Administration Building)

Each plot is marked by a notice board which include details of relevant contacts and telephone numbers as required in the licence.

All access roads are of tarmac surface construction and maintained as necessary to ensure their continuing suitability for road traffic.

Sludge holding areas are constructed to provide effective containment of sludge, and are subject to inspection during corporate and local audits to ensure compliance with corporate standards.

Note: Corporate audits are currently scheduled on a triennial basis, internal audits operate to an annual cycle.

3.1.2 Vehicles:

All vehicles used for landfarming operations are stored on-site (adjacent to block 56 on site plan).

Vehicles used for landfarming operations do not normally leave the site. Should an occasion arise when a vehicle has to travel on a public highway, then Texaco's Engineer (Civil) is responsible for ensuring that the contractors have carried out any necessary wheel washing to remove surplus mud.

Note: Wheel washing will normally be carried out in the vicinity of the contractors area. Washings from this area are contained in the site drainage system and directed to the waste water treatment plant for disposal.

3.1.3 Security:

The refinery is a secure area, bounded by a three-metre chain link fence, and meeting HM Customs and Excise requirements for a bonded installation. The security office is continuously manned - with all site access subject to formal control by the security guards. Security duties include regular checks on the refinery fence to ensure its integrity is maintained.

3.2 Types Of Waste:

3.2.1 The classes of waste landfarmed under the scope of the above licence are:

- (a) Oily sludges from tank/vessel cleaning activities
- (b) Biological sludges from the Waste Water Treatment Plant (WWTP)
- (c) Sand/Oil mixtures from oil spill clean up activities
- (d) Oil contaminated soil
- (e) Inert clay
- (f) Calcium fluoride sludge

3.2.2 All wastes will have originated from processes or activities carried out on the Pembroke Plant site.

3.3 Operation of Landfarms:

3.3.1 Initial Review:

- (a) Disposal of Plant waste shall be carried out in accordance with SPI 7.025 (ref: 1.2) which identifies the roles, responsibilities and documentation relating to waste management at the Pembroke Plant site. Specific responsibilities in respect of on-site disposal of waste are documented in SPI 7.026 (ref: 1.3).

- (b) Each request for disposal of material shall be raised on form TR 548 and reviewed by Environment Section personnel to determine the most appropriate disposal method and location.

3.3.2 Landfarm Site Administration:

- (a) The Engineer (Civil) is responsible for co-ordinating the day to day collection and spreading of waste materials on the landfarm sites.
- (b) The maximum amount of material disposed during any calendar year shall not exceed 24,000 tonnes.
- (c) The waste will be allocated to specific landfarm locations to ensure a reasonably even distribution of waste material, whilst avoiding waterlogged soil with the potential for soil compaction, and avoiding the oil content of the top soil layer exceeding 10% wt/wt. (See also section 3.5 for further guidance).
- (d) Where the immediate landfarming of material is not practicable for operational reasons, the material will be transferred to temporary holding areas (see para 3.1.1) until arrangements can be made for its disposal in accordance with licence conditions.
- (e) Acidity regulator (burned or ground limestone), fertilizer (agricultural grades: NPK) and soil conditioning materials (straw and grass clippings) may be incorporated into the topsoil layer periodically to enhance biological activity. All treatments shall be approved in writing by Environment section personnel.
- (f) All landfarming operations shall be restricted to daylight hours.
- (g) In the event of noticeably unpleasant odours arising from landfarming activities, the contractors will cease operations and contact Environment personnel through line supervision to obtain guidance on a suitable course of action.
- (h) Records of the quantity of material deposited on each plot shall be entered into a computerised data system which can be accessed by Environment Section Personnel.

3.4 Soil Condition: Monitoring and Reporting:

- 3.4.1 Soil samples from all landfarm plots will be taken annually and analysed by an independent laboratory. The analytical requirements will be determined by the environment group on the basis of the annual review (3.5).

- 3.4.2 A sample of groundwater shall be drawn annually from a borehole beneath a typical landfarming site and analysed for any components identified during the annual review (3.5) as having a potential impact on water quality.
- 3.4.3 All tests will be carried out in accordance with the latest versions of ADAS test methods, or other published standard test procedures, unless otherwise agreed in writing by the regulatory body.
- 3.4.4 Environment personnel shall provide the regulatory body with an annual summary of test results and waste disposal records.

3.5 Annual Review:

3.5.1 Environment personnel shall annually review operation of the landfarm sites and issue guidance (by memo) to Business Unit Leaders on the future use of the sites. This guidance should include an estimate of the maximum acceptable loading of sludges for each of the sites, and will take account of:

- (a) The physical state of the site, and continuing suitability for vehicular access (general appearance, state of access roads, proximity of other plant operations).
- (b) Any specific requirements defined in the scope of the operating licence granted by the regulatory body.
- (c) Analytical results, to ensure effective conditions for degradation of hydrocarbon, and to ensure that the content of any toxic components in the soil remains within acceptable limits so as not to prejudice future non-industrial use of the land.
- (d) Potential impact on groundwater quality, based on analysis of water from representative borehole samples.

Note: The optimum pH range for effective biological degradation is 7 to 8. The oil content should not exceed 10%.

Limits for metals and fluoride content should take account of the values recommended in relevant guidance documents. These will include the ICRL Guidance Note on Contaminated Land, and MAFF consultative document for the protection of soil. (refs:1.5, 1.6), together with DoE guidance on the EC Groundwater Protection Directive (ref 1.7).

4. Attachment

Site plan 50-AA-653