

Standard rules SR2015 No2

The Environmental Permitting (England & Wales) Regulations 2016

Storage and handling of crude oil arising from onshore oil and gas exploration and production activities

Introductory note

This introductory note does not form a part of these standard rules.

When referred to in an environmental permit these rules will allow the operator to carry out the storage and handling of crude oil at a specified location, provided that the permitted activities meet the following location criteria:

Category	Relevant criteria
Sensitive receptors (people)	Not within 200m of nearest sensitive receptor
Sensitive receptors (conservation and heritage)	Not within 500m of European Site or a Site of Special Scientific Interest
Surface water	Not within 50m of any watercourse
Emissions to water	Not within a groundwater source protection zone 1 or 2, or where a source protection zone has not been defined then not within 250 metres of any well, spring or borehole used for the supply of water for human consumption or food production purposes. This must include private water supplies.

These rules will permit the storage and handling of oil

Category	Relevant criteria (or N/A)
Activity and scale	Storage and handling of crude oil less than 500 tonnes.
Key restrictions	These rules do not apply to installations with more than one operator. These rules do not apply to the storage of crude oil with a hydrogen sulphide content greater than 10 ppm

Emissions	These rules do not allow any point source emission into surface waters or groundwater.
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End of introductory note

Record of changes

Version	Date	Change
1.0	April 2015	Published
2.0	April 2019	Reviewed and amended under Standard Rules consultation no.16

Rules

1 Management

1.1 General management

1.1.1 The operator shall manage and operate the activities:

- (a) in accordance with a written management system that identifies and minimises risks of pollution, so far as is reasonably practicable, including those risks arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and
- (b) using sufficient competent persons and resources.

1.1.2 Records demonstrating compliance with rule 1.1.1 shall be maintained.

1.1.3 Any person having duties that are or may be affected by the matters set out in these standard rules shall have convenient access to a copy of the permit.

1.2 Energy efficiency

1.2.1 For the activities referenced in Table 2.1 The operator shall:

- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
- (b) review and record at least every 4 years whether there are suitable opportunities to improve the energy efficiency of the activities; and
- (c) take any further appropriate measures identified by a review.

1.3 Avoidance, recovery and disposal of wastes produced by the activities

1.3.1 The operator shall take appropriate measures to ensure that:

- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
- (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

1.3.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

2 Operations

2.1 Permitted activities

2.1.1 The only activities authorised by the permit are the activities specified in table 2.1 below.

Table 2.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
S1.2 A(1)e	Loading unloading, handling or storage of or physical, chemical or thermal treatment of (i) crude oil (ii) stabilised crude oil	Storage capacity limited to 500 tonnes Crude oil will not have a hydrogen sulphide content greater than 10ppm

2.2 The site

2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan attached to the permit.

2.2.2 The activities shall not be carried out within:

- (a) 500 metres of a European site;
- (b) 200 metres of a residential dwelling or workplace;
- (c) a groundwater source protection zone 1 or 2, or where a source protection zone has not been defined then within 250 metres of any well, spring or borehole used for the supply of water for human consumption or food production purposes. This must include private water supplies;
- (d) 50 metres of any watercourse.

2.3 Operating techniques

2.3.1 The activities shall be operated in accordance with these rules, unless otherwise agreed in writing by the Environment Agency

2.3.2 The activities shall be operated using the techniques and in the manner described in Table 2.3 below.

Table 2.3 Operating techniques

1. Oil shall be stored in vessels which are of sufficient strength and structural integrity to ensure that it is unlikely to burst or leak in its ordinary use.
2. The storage vessel must be fitted with level detection and alarms and automated overfill protection.
3. Any water contaminated with crude oil that is drained off from the vessel and is not being recycled for reinjection must be collected for treatment before disposal.
4. The vessels must be situated within a secondary containment system which satisfies the following requirements:
 - (a) The containment capacity must exceed 110% of the storage capacity of the largest vessel that it contains or 25% of their aggregate storage capacity, whichever is the greater.
 - (b) It must be positioned, or other steps must be taken, so as to minimise the risk of damage by impact from vehicles and machinery.
 - (c) It must be constructed of materials that are impermeable to water and oil; including the walls, base and any sealant used in joints.
 - (d) There must be no penetrations through the base and walls.
5. Where practical all ancillary equipment and pipe fittings such as pumps, filters, heat exchanges, valves and instruments should be situated within the secondary containment system. Where this is not practical, the ground must be protected by tertiary containment provisions.
6. Any potential ignition sources should be located outside oil or condensate tank storage bunds, on an impervious base.
7. Any road tanker or rail car loading systems must be fully contained and the delivery system shall be fitted with dry break couplings.
8. During loading of road tankers, the road tanker shall be back vented to the bulk storage tank, or routed to a suitable vent treatment system.
9. Provisions shall be made to minimise the emissions of non-methane volatile organic compounds (NMVOCs) and methane from the oil storage tank vent.
10. Any water collected in the secondary containment (bund) must be sampled and analysed before release to controlled water. If found to be contaminated with crude oil, it must be collected for treatment before disposal.
11. The entire site will be underlain by an impermeable membrane. This will be constructed in accordance with CIRIA C736. The membrane and its seal shall be maintained.

3 Emissions and monitoring

3.1 Emissions to air, land and water

3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in table 3.1.

Table 3.1 Point source emissions to air – emission limits and monitoring requirements				
Emission point & source	Parameter	Emission limits (incl units)	Monitoring Frequency and Standard or Method	Reporting Period
A1: Oil storage tank vent	Non-methane volatile organic compounds Methane	-	Monthly by calculation as set out in Chapter 7 of the EPA AP-42 Tank Calculation Methods, unless otherwise agreed in writing by the Environment Agency	Every 3 months

3.2 Emissions of substances not controlled by emission limits

3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this rule if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.

3.2.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
- (b) implement the approved emissions management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency.

- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.2.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
 - (b) implement the approved noise and vibration management plan from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

- 3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in table 3.1.
- 3.5.2 If required by the Environment Agency, the operator shall
- (a) take such samples and conduct such measurements, tests, surveys, analyses and calculations, including environmental measurements and assessments, at such times and using such methods and equipment as the Environment Agency may specify and
 - (b) keep samples, provide samples or dispatch samples for tests at a laboratory, as the Environment Agency specifies, and ensure that the samples or residues thereof are collected from the laboratory within three months of receiving written notification that testing and repackaging in accordance with the relevant legislation are complete.
- 3.5.3 The operator shall maintain records of all monitoring required by these rules including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.5.4 The operator shall carry out:
- (a) regular calibration, at an appropriate frequency, of systems and equipment provided for carrying out any monitoring and measurements necessary to determine compliance with these rules; and
 - (b) regular checking, at an appropriate frequency, that such systems and equipment are serviceable and correctly used.

4 Information

4.1 Records

- 4.1.1 All records required to be made by these standard rules shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall maintain convenient access, in either electronic form or hard copy, to the records, plans and management system required to be maintained by these rules.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by these rules to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
 - (i) inform the Environment Agency,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit rule the operator must immediately—
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of a permit rule which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit rules has been restored.

4.3.2 Any information provided under standard rule 4.3.1 shall be confirmed in writing within 24 hours.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator’s trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (c) any change in the operator’s name or address; and
- (d) any steps taken with a view to the dissolution of the operator.

In any other case:

- (e) the death of any of the named operators (where the operator consists of more than one named individual);
- (f) any change in the operator’s name(s) or address(es); and
- (g) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 The Environment Agency shall be notified in writing at least 21 days in advance or, where this is not possible, without delay, of the operator’s intention to cease activities.

4.4 Interpretation

4.4.1 In these rules the expressions listed below shall have the meaning given in that table.

4.4.2 In these rules references to reports and notifications mean written reports and notifications, except where reference is made to notification being made immediately, in which case it may be provided by telephone.

Term	Interpretation
“accident”	An accident that may result in pollution
“authorised officer”	Any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.
“crude oil”	Is crude oil, gas condensate, gas condensate and mixtures of crude oil and water that contain more than 25% by weight crude oil
“emissions of substances not controlled by emission limits”	Emissions of substances to air, water or land from the activities, either from the emission points specified in these standard rules or from other localised or diffuse sources, which are not controlled by an emission limit.

“emissions to land”	Includes emissions to groundwater.
“environment”	All or any of the media of air, water (including sewers and drains) and land.
“EP Regulations”	The Environmental Permitting (England and Wales) Regulations 2016 No. 1154 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.
“European site”	Means a European site within the meaning of Regulation 8 of the Conservation of Habitats and Species Regulations 2017.
“groundwater”	All water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
“groundwater source protection zone”	Has the meaning given in the document titled “The Environment Agency approach to groundwater protection” published by the Environment Agency in 2018.
“impermeable surface”	A surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system”.
“nearest sensitive receptor”	The nearest place to the permitted activities where people are likely to be for prolonged periods. This term would therefore apply to dwellings (including any associated gardens) and to many types of workplaces. We would not normally regard a place where people are likely to be present for less than 6 hours at one time as being a sensitive receptor. The term does not apply to the operators of the permitted facility, their staff when they are at work or to visitors to the facility, as their health is covered by Health and Safety at Work legislation. N.B. the term would apply to dwellings occupied by an operator’s family.
“pollution”	Emissions as a result of human activity which may – (a) be harmful to human health or the quality of the environment (b) cause offence to a human sense (c) result in damage to material property, or (d) impair or interfere with amenities and other legitimate uses of the environment.
“quarter”	Means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“samples”	Samples that have been prepared or treated to enable measurements of activity to be made
“sealed drainage system” in relation to an impermeable surface	A drainage system with impermeable components which does not leak and which will ensure that: a) no liquid will run off the surface otherwise than via the system; b) except where they may lawfully be discharged to foul sewer, all liquids entering the system are collected in a sealed sump.
“secure storage”	Storage where waste cannot escape and is not accessible to the public
“site”	The location where the activities can take place
“SSSI”	Site of Special Scientific Interest within the meaning of the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000).
“year”	Calendar year ending 31 December.

End of standard rules