

## SCHEDULE 1

Regulation 5

### PROVISIONS TO BE INCLUDED IN A LICENCE

#### **Closure of storage site by the operator**

1.—(1) Subject to paragraph (4), the operator must close a storage site where the conditions for closure referred to in regulation 8(h) of the Storage of Carbon Dioxide (Licensing etc.) (Scotland) Regulations 2011 (“the Regulations”) are met.

(2) Subject to paragraph (4), the operator may close a storage site if—

- (a) the consent of the authority has been given following an application under sub-paragraph (3); and
- (b) any conditions attached to that consent have been met.

(3) An application for the authority’s consent to the closure of a storage site must—

- (a) be made in writing and sent to the Scottish Ministers; and
- (b) contain the reasons why the operator proposes to close the storage site.

(4) A storage site may not be closed under sub-paragraph (1) or (2) until the terms of the post-closure plan have been determined under regulation 12(3) of the Regulations.

#### **Post-closure plan**

2.—(1) Prior to the closure of a storage site the operator must submit a proposed post-closure plan to the authority for approval.

(2) The proposed post-closure plan must be based on the provisional post-closure plan, subject to any modifications proposed by the operator.

(3) In deciding whether to propose any such modifications, the operator must take into account—

- (a) an analysis of the relevant risks;
- (b) current best practice; and
- (c) any improvements in the available technology.

#### **Post-closure obligations**

3.—(1) After a storage site has been closed and until the licence is terminated, the operator must continue to comply with the obligations in the storage permit to—

- (a) monitor the storage site;
- (b) report and notify leakages and significant irregularities (with the exception of the obligation to provide information on the quantities, properties and composition of the CO<sub>2</sub> streams that have been delivered to and injected into the storage site); and
- (c) take corrective measures.

(2) For the purpose of complying with the obligations referred to in sub-paragraph (1), any reference to the monitoring plan or the corrective measures plan is to be read as a reference to the post-closure plan.

(3) The operator must seal the storage site and remove the injection facilities in accordance with its obligations under Part 4 of the Petroleum Act 1998.

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## **Extraction of stored CO<sub>2</sub>**

4. The operator must not (and must not permit any other person to) extract stored CO<sub>2</sub> from a storage site except with the prior written consent of the authority and in accordance with any conditions subject to which consent is given.

## **Interpretation**

5.—(1) In this licence the following expressions have the meaning given by regulation 1(3) of the Storage of Carbon Dioxide (Licensing etc.) (Scotland) Regulations 2011—

“the authority”;  
“corrective measures plan”;  
“injection”;  
“licence”;  
“monitoring plan”;  
“operator”;  
“post-closure plan”;  
“provisional post-closure plan”; and  
“storage permit”.

(2) The following expressions have the meanings given by Article 3 of Directive [2009/31/EC](#) of the European Parliament and of the Council on the geological storage of carbon dioxide and amending Council Directive [85/337/EEC](#), European Parliament and Council Directives [2000/60/EC](#), [2001/80/EC](#), [2004/35/EC](#), [2006/12/EC](#), [2008/1/EC](#) and Regulation (EC) No 1013/2006 (and cognate expressions are to be construed accordingly)—

“closure” of a storage site;  
“corrective measures”;  
“CO<sub>2</sub> plume”;  
“CO<sub>2</sub> stream”;  
“exploration”;  
“hydraulic unit”;  
“leakage”;  
“migration”;  
“significant irregularity”;  
“significant risk”;  
“storage complex”;  
“storage site”;  
“substantial change”;  
“waste”; and  
“water column”.

## SCHEDULE 2

Regulation 8(d)

### PROVISIONS TO BE INCLUDED IN A STORAGE PERMIT

#### Acceptance and injection of CO<sub>2</sub>

1.—(1) In order to be injected into the storage site the CO<sub>2</sub> stream must consist overwhelmingly of carbon dioxide, and must satisfy the conditions in sub-paragraph (2).

(2) The stream—

- (a) must contain no waste or other matter added for the purposes of disposal;
- (b) may only contain incidental or trace substances (to the extent permitted by any legislation applicable to those substances) if the concentrations of all such substances are below the levels that would—
  - (i) adversely affect the integrity of the storage site or the relevant transport infrastructure; or
  - (ii) pose a significant risk to the environment or human health.

(3) In sub-paragraph (2)—

- (a) “incidental substance” means a substance which has become associated with the CO<sub>2</sub> either at its original source or as a result of the process of capture or injection; and
- (b) “trace substance” means a substance which has been added to the CO<sub>2</sub> in order to assist in the monitoring and verifying of its migration after injection.

(4) Before accepting and injecting the stream the operator must ensure that the conditions in sub-paragraphs (1) and (2) can be met, by carrying out—

- (a) an analysis of the composition of the stream, and in particular of any corrosive substances that may be present in it; and
- (b) an assessment of the risk that the stream will fail to comply with those conditions.

(5) The operator must maintain a register, at a place and in a manner approved by the authority, of the quantities and properties of the CO<sub>2</sub> streams that have been delivered to, and injected in, the storage site (including the composition of those streams).

#### Monitoring

2.—(1) The operator must carry out a programme of monitoring of the storage complex and injection facilities, for the purposes specified in sub-paragraph (3).

(2) Such monitoring must include (where possible) the monitoring of the CO<sub>2</sub> plume and (where appropriate) of the surrounding environment.

(3) The purposes are—

- (a) the comparison of the actual and modelled behaviour of the CO<sub>2</sub> (and the naturally-occurring formation water) in the storage site;
- (b) the detection of any significant irregularities;
- (c) the detection of any migration of CO<sub>2</sub>;
- (d) the detection of any leakage of CO<sub>2</sub>;
- (e) the detection of any significant adverse effects on the surrounding environment, and in particular on—
  - (i) drinking water;

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- (ii) human populations; and
  - (iii) users of the surrounding biosphere;
  - (f) the assessment of the effectiveness of any corrective measures taken;
  - (g) updating the assessment of the safety and integrity, both short-term and long-term, of the storage complex (including the assessment of whether the stored CO<sub>2</sub> will be completely and permanently contained).
- (4) The monitoring must be based on the monitoring plan.
- (5) The monitoring plan must be updated in accordance with Annex II to the Directive and in any event within five years of the approval of the original plan, in order to take account of—
- (a) changes to the assessed risk of leakage;
  - (b) changes to the assessed risks to the environment and human health;
  - (c) new scientific knowledge; and
  - (d) improvements in best available technology.
- (6) The updated plan must be submitted for approval by the authority.
- (7) The authority may—
- (a) approve that plan; or
  - (b) require the operator to make such modifications to it as the authority (after consulting the operator) considers necessary,

and the updated monitoring plan is the plan as so approved or modified.

(8) Sub-paragraphs (5) to (7) apply to the further updating of an updated plan as they apply to the updating of the original plan.

### **Reporting and notification of leakages and significant irregularities**

**3.—(1)** The operator must send to the authority a report in respect of each reporting period containing the information specified in sub-paragraph (5).

(2) The report must be sent to the authority no later than 4 weeks after the end of the relevant reporting period.

(3) Unless the authority determines otherwise under sub-paragraph (4), the reporting periods are the period of one year beginning with the commencement of injection and each subsequent yearly period.

(4) At any time before the commencement of injection, or during a current reporting period, the authority may notify the operator that (beginning with the next reporting period) reporting periods are to be a period of less than one year that is specified in the notice.

(5) The information referred to in sub-paragraph (1) is—

- (a) the results of the monitoring carried out in accordance with the provisions of this storage permit (including details of the monitoring technology employed);
- (b) the quantities, properties and composition of the CO<sub>2</sub> streams delivered to, injected by, and registered by the operator in accordance with the provisions of this storage permit;
- (c) proof that the financial security to be maintained in accordance with the provisions of this storage permit has come into effect and remains in force; and
- (d) any other information requested by the authority that the authority considers relevant for the purposes of assessing compliance with the conditions of the storage permit or for increasing knowledge of the behaviour of the CO<sub>2</sub> stored at the storage site.

(6) If the operator becomes aware of any leakages or significant irregularities, the operator must immediately notify the authority.

(7) If the operator becomes aware of any leakages, or of any significant irregularities which imply the risk of leakage, the operator must immediately notify the person who is the regulator in relation to the storage site for the purposes of legislation implementing the ETS Directive.

#### **Notification and implementation of changes**

4.—(1) The operator must notify the authority of any change planned in the operation of the storage site, including any changes concerning the operator.

(2) A notification under sub-paragraph (1) must specify the date on which the operator proposes to implement the planned change (“the target date”).

(3) Except where sub-paragraph (4) applies, such a notification must be made at least three months before the target date.

(4) If the change solely concerns the operator, the notification must be made at least four weeks before the target date.

(5) The change may not be implemented before the later of—

(a) the target date or any date notified under regulation 10(4)(b) of the Regulations; and

(b) the date notified by the authority in accordance with regulation 10(1)(b)(ii) of the Regulations.

(6) The change may not be implemented if the authority makes a notification to that effect under regulation 10(2)(b) of the Regulations.

(7) Notwithstanding sub-paragraphs (5) and (6), the change may be implemented on or after the later of the dates mentioned in sub-paragraph (5)(a) if the authority has not before then made a notification under regulation 10(1)(b)(ii) or (2)(b) of the Regulations.

#### **Review, and modification or revocation of the permit**

5. The permit is to be reviewed, and where necessary modified or revoked, by the authority in accordance with regulation 10 of the Regulations.

#### **Corrective measures**

6.—(1) If the operator becomes aware of any leakages or significant irregularities, the operator must take the necessary corrective measures and measures for the protection of human health.

(2) Subject to regulation 9 of the Regulations, the measures taken must include those set out in the corrective measures plan.

#### **Financial security**

7.—(1) The operator must maintain a financial security that—

(a) is of an amount (“the secured amount”) sufficient to ensure that the obligations specified in sub-paragraph (5) can be met; and

(b) is in force before the commencement of injection.

(2) The financial security remains in force until—

(a) the licence is terminated; or

(b) if the storage permit is revoked, until—

(i) a new storage permit is granted; or

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- (ii) if the storage site is closed following such revocation, until the licence is terminated and the financial contribution obligation is fulfilled.
- (3) Following receipt of a report in respect of a reporting period made by the operator in accordance with the provisions of this storage permit, the authority is to assess whether the secured amount is appropriate in the light of—
  - (a) the assessed risk of leakage; and
  - (b) the estimated costs of meeting the obligations specified in sub-paragraph (5).
- (4) If, following that assessment, the authority decides that the secured amount is to be adjusted—
  - (a) the authority must notify the operator of the new amount that is required; and
  - (b) where the secured amount is less than that new amount, the operator must ensure that it is increased to the new amount within 3 months of receiving that notification.
- (5) The obligations are—
  - (a) all obligations of the operator arising under the storage permit, including those arising in respect of the closure of the storage site and during the period between such closure and the termination of the licence;
  - (b) the obligation to pay the authority’s costs under regulation 9(4)(b) or 11(6) of the Regulations; and
  - (c) any obligations of the operator arising in respect of the storage site under legislation implementing the ETS Directive.
- (6) Where the storage permit is revoked—
  - (a) the obligations of the operator under this paragraph continue in effect until the licence is terminated; but
  - (b) the assessment by the authority under sub-paragraph (3) is to be made at such intervals as the authority may determine.

### **Interpretation**

- 8.** In this storage permit—
  - (1) “the Regulations” means the Storage of Carbon Dioxide (Licensing etc.) (Scotland) Regulations 2011.
  - (2) The following expressions have the meaning given by regulation 1(3) of the Regulations—
    - “the authority”;
    - “corrective measures plan”;
    - “the Directive”;
    - “the ETS Directive”;
    - “financial security”;
    - “injection”;
    - “legislation”;
    - “licence”;
    - “monitoring plan”;
    - “operator”; and
    - “storage permit”.
  - (3) The following expressions have the meanings given by Article 3 of the Directive (and cognate expressions are to be construed accordingly)—

“closure” of a storage site;  
“corrective measures”;  
“CO<sub>2</sub> plume”;  
“CO<sub>2</sub> stream”;  
“leakage”;  
“migration”;  
“significant irregularity”;  
“significant risk”;  
“storage complex”;  
“storage site”; and  
“waste”.