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STATUTORY RULES OF NORTHERN IRELAND

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**2015 No. 387**

**ENVIRONMENTAL PROTECTION**

**The Storage of Carbon Dioxide (Licensing  
etc.) Regulations (Northern Ireland) 2015**

*Made - - - - 1st December 2015*

*Coming into operation 4th January 2016*

The Department of Enterprise, Trade and Investment is a department designated<sup>(1)</sup> for the purposes of section 2(2) of the European Communities Act 1972<sup>(2)</sup> in relation to the environment.

These Regulations make provision for a purpose mentioned in section 2(2) of the European Communities Act 1972, and it appears to the Department that it is expedient for references to EU instruments, or provisions of those instruments, in these Regulations to be construed as references to those instruments or provisions as amended from time to time.

Accordingly, the Department of Enterprise, Trade and Investment makes these Regulations in exercise of the powers conferred by section 2(2) of the European Communities Act 1972, as read with paragraph 1A of Schedule 2 to that Act<sup>(3)</sup>.

*General*

**Citation and commencement**

1. These Regulations may be cited as the Storage of Carbon Dioxide (Licensing etc.) Regulations (Northern Ireland) 2015, and come into operation on 4th January 2016.

**Interpretation**

2.—(1) The Interpretation Act (Northern Ireland) 1954<sup>(4)</sup> applies to these Regulations as it applies to an Act of the Assembly.

(2) In these Regulations—

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(1) [S.I. 2008/301](#)  
(2) [1972 c.68](#); section 2(2) was amended by section 27(1)(a) of the Legislative and Regulatory Reform Act 2006 ([c.51](#)) and by section 3(3) of, and Part 1 of the Schedule to, the European Union (Amendment) Act 2008 ([c.7](#))  
(3) Paragraph 1A of Schedule 2 was inserted by section 28 of the Legislative and Regulatory Reform Act 2006, and amended by [S.I. 2007/1388](#) and by section 3(3) of, and Part 1 of the Schedule to, the European Union (Amendment) Act 2008  
(4) [1954 c.33 \(N.I.\)](#)

- (a) any reference to a numbered section is to that section of the Energy Act 2008<sup>(5)</sup> and any reference to Chapter 3 is a reference to Chapter 3 of Part 1 of that Act; and
- (b) any reference (except in paragraph (4)) to an EU instrument, or a provision of such an EU instrument, is to that instrument or provision as amended from time to time.
- (3) In these Regulations—
- “appraisal term” has the meaning given to it in regulation 4(a);
- “the authority” means the Department of Enterprise, Trade and Investment as licensing authority under section 18(2);
- “CO<sub>2</sub>” means carbon dioxide;
- “corrective measures plan” has the meaning given to it in regulation 8(6);
- “the Directive” means Directive [2009/31/EC](#) of the European Parliament and of the Council of 23 April 2009 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<sup>(6)</sup>;
- “entering”, in relation to premises, includes, where applicable, boarding, and cognate expressions are to be construed accordingly;
- “the Environmental Liability Directive” means Directive [2004/35/EC](#) of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage<sup>(7)</sup>;
- “the ETS Directive” means Directive [2003/87/EC](#) of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive [96/61/EC](#)<sup>(8)</sup>;
- “financial security” includes—
- (a) a charge over a bank account or any other asset;
- (b) a deposit of money;
- (c) a performance bond or guarantee;
- (d) an insurance policy;
- (e) a letter of credit;
- “injection” means injection of CO<sub>2</sub> into a storage site;
- “inspection” means an inspection of a storage complex for the purpose of discharging a function described in sub-paragraph (a) or (b) of regulation 16(1);
- “inspection report” has the meaning given to it in regulation 17(1);
- “inspector” means a person appointed by the authority under section 27(1);
- “legislation” means legislation in force in the United Kingdom (whether passed, or made, before, after or at the same time as the commencement of these Regulations);

(5) [2008 c.32](#) as amended by [S.I. 2011/2453](#)

(6) OJ No L 140, 5.6.2009, p 114, as amended by Directive 2011/92/EU (OJ No L26 28.1.2012. p.1) of the European Parliament and of the Council

(7) OJ No L 143, 30.4.2004, p 56, as amended by Directives [2006/21/EC](#) (OJ No L 102, 11.4.2006, p 15), [2009/31/EC](#) (OJ No L 140, 5.6.2009, p 114) and [2013/30/EU](#) (OJ No L 178, 28.6.2013, p 66) of the European Parliament and of the Council

(8) OJ No L 275, 25.10.2003, p 32, as amended by Directives [2004/101/EC](#) (OJ No L 338, 13.11.2004, p 18) and [2008/101/EC](#) (OJ No L 8, 13.1.2009, p 3) of the European Parliament and of the Council, Regulation (EC) No 219/2009 of the European Parliament and of the Council (OJ No L 87, 31.3.2009, p 109) Directive [2009/29/EC](#) (OJ No L 140, 5.6.2009, p 63) of the European Parliament and Council and Regulation (EU) No 421/2014 of the European Parliament and of the Council (OJ No L 129, 30.4.2014, p 1)

“licence” means a licence (other than a Northern Ireland exploration licence) granted by the authority under section 18(1) in respect of activities within section 17(2)(a) to (d), and “licence holder” is to be construed accordingly;

“licensed area” means the area within which activities are authorised under a licence;

“monitoring plan” has the meaning given to it in regulation 8(5);

“Northern Ireland exploration licence” means a licence granted by the authority under section 18(1) which authorises only activities within section 17(2)(c) and the establishment or maintenance of an installation in a controlled place for the purpose of such activities and which—

- (a) does not grant to the holder the sole right to carry out exploration of a controlled place, and
- (b) is issued in combination with –
  - (i) a licence under section 2 of the Petroleum (Production) Act (Northern Ireland) 1964<sup>(9)</sup> to search for petroleum;
  - (ii) a prospecting licence under section 11(1)(b) of the Mineral Development Act (Northern Ireland) 1969<sup>(10)</sup> to search for mines and minerals;
  - (iii) a licence under section 3 of the Petroleum Act 1998<sup>(11)</sup> to search for petroleum; or
  - (iv) a licence under section 4 to explore any controlled place with a view to carrying on activities within section 2(3)(a) to (d) and establish or maintain an installation in a controlled place for the purposes of such exploration;

“operator” means the person who carries on or (where different) controls activities (within the meaning of section 17(2)) at a storage site;

“post-closure plan” has the meaning given to it in regulation 13(3) or (4);

“premises” includes—

- (a) any carbon storage installation (within the meaning of section 30(5)); and
- (b) any land, vehicle, vessel, aircraft, hovercraft or moveable structure, excluding any such thing or part thereof that is used as a dwelling;

“provisional post-closure plan” has the meaning given to it in regulation 13(2);

“routine inspection” has the meaning given to it in regulation 15(1);

“storage permit” means a consent granted under a licence, authorising the use of a place as a storage site;

“target date” has the meaning given to it in regulation 11(3)(a).

(4) The following expressions have the meanings given by Article 3 of the Directive (and cognate expressions are to be construed accordingly)—

“closure” (in relation to a storage site);

“corrective measures”;

“CO<sub>2</sub> plume”;

“CO<sub>2</sub> stream”;

“exploration”;

“hydraulic unit”;

“leakage”;

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<sup>(9)</sup> 1964 c.28 (N.I.)

<sup>(10)</sup> 1969 c.35 (N.I.)

<sup>(11)</sup> 1998 c.17

“migration”;  
“significant irregularity”;  
“significant risk”;  
“storage complex”;  
“storage site”;  
“substantial change”;  
“waste”;  
“water column”.

### *Licences*

#### **Limitation on licensing powers**

3. A licence shall not be granted for the purpose of storing CO<sub>2</sub> in the water column.

#### **Applications for a licence**

4. An application for a licence shall be made in writing to the authority, and shall include either—

- (a) a request that the licence specify a period (the “appraisal term”) during which the licence holder has the right to explore the licensed area before making an application for a storage permit; or
- (b) if no such period is requested, a statement of the reasons why such exploration is not considered necessary.

#### **Appraisal term**

5.—(1) A licence shall include an appraisal term where the authority determines that exploration is required to generate the information necessary to select a storage site.

(2) The appraisal term shall not exceed the period necessary to—

- (a) generate the information necessary to select a storage site; and
- (b) prepare the documents required for an application under regulation 7.

(3) Subject to paragraph (2), the appraisal term may be extended by the authority at the written request of the licence holder, under the conditions laid down by the licence, provided that the authority is satisfied that any exploration so far carried out has been in accordance with the licence.

(4) Where a licence includes an appraisal term, the licence (unless sooner determined under any of its provisions) shall cease and determine—

- (a) at the end of the appraisal term, if no application for a storage permit is made before that date; or
- (b) if such an application is refused, when that refusal is notified to the licence holder.

#### **Content of a licence**

6. A licence shall include the provisions contained in Schedule 1.

### *Storage permits*

#### **Applications for a storage permit**

7.—(1) The licence holder may, under the conditions laid down by the licence, apply to the authority for a storage permit in respect of a storage site within the licensed area.

(2) Where the licence includes an appraisal term, the application may not be made unless the exploration required by the licence has been completed, and all other terms and conditions of the licence have been complied with.

- (3) An application shall be made in writing, and shall contain (at least) the following—
- (a) the name and address of the proposed operator;
  - (b) evidence of the matters referred to in regulation 8(1)(a) to (d);
  - (c) in relation to the CO<sub>2</sub> that is to be contained within the storage site—
    - (i) the total quantity that is to be injected and stored;
    - (ii) a proposed date on which injection is to commence;
    - (iii) the prospective sources and transport methods;
    - (iv) the composition of the CO<sub>2</sub> streams that are to be injected;
    - (v) the proposed injection rates and pressures;
    - (vi) the proposed location of the injection facilities;
  - (d) a description of measures to prevent any significant irregularities;
  - (e) a proposed monitoring plan drawn up in accordance with Annex II to the Directive and that takes into account the obligations imposed on the operator under legislation implementing Article 14 of the ETS Directive;
  - (f) a proposed corrective measures plan;
  - (g) the proposed provisional post-closure plan drawn up in accordance with regulation 13(1);
  - (h) the information required to be provided in relation to the storage site under legislation implementing Article 5 of Directive 2011/92/EU(12) of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment;
  - (i) details of a financial security that will satisfy the requirements in paragraph 7(1) of Schedule 2, including proof that (if the storage permit is granted) such a security will be in force before the proposed date on which injection is to commence.
- (4) The authority shall forward to the European Commission—
- (a) the permit application (within one month after receipt); and
  - (b) any other related material that the authority proposes to take into account in considering the application.
- (5) The authority shall also (within one month after receipt) forward a copy of the permit application to the Department of the Environment.

#### **Grant of storage permits**

- 8.—(1) Before granting a storage permit the authority shall be satisfied that—
- (a) the storage complex and the surrounding area have been sufficiently characterised and assessed in accordance with the criteria set out in Annex I to the Directive;

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(12) OJ No L 26, 28.1.2012. p.1. This Directive was implemented in Northern Ireland by S.R. 2012 No. 59

- (b) no part of the storage complex extends beyond the territories of the member states;
  - (c) under the proposed conditions of use of the storage site, there is no significant risk of leakage or of harm to the environment or human health; and
  - (d) the conditions in paragraph (3) are met.
- (2) For the purposes of paragraph (1)(b), the territory of a member state includes its exclusive economic zone and continental shelf within the meaning of Articles 55 and 76 of the United Nations Convention on the Law of the Sea(13).
- (3) The conditions are that the proposed operator—
- (a) is technically competent (including in the operation of environmental management systems), financially sound, and can be relied upon to carry out the functions of an operator; and
  - (b) has in place an appropriate programme of professional and technical development and training.
- (4) Where more than one proposed storage site is contained within the same hydraulic unit, before granting a storage permit for either site the authority shall be satisfied that the requirements for the grant of such a permit can be met simultaneously.
- (5) In considering the application for the storage permit, the authority may—
- (a) approve the proposed monitoring plan; or
  - (b) require the applicant to make such modifications to it as the authority (after consulting the applicant) considers necessary,
- and (if the permit is granted) the monitoring plan is the plan as so approved or modified.
- (6) In considering the application for the storage permit, the authority may—
- (a) approve the proposed corrective measures plan; or—
  - (b) require the applicant to make such modifications to it as the authority (after consulting the applicant) considers necessary,
- and (if the permit is granted) the corrective measures plan is the plan as so approved or modified.
- (7) If the authority is minded to grant a storage permit—
- (a) the authority shall forward a draft of the proposed permit to the European Commission, together with any material taken into consideration that has not already been provided under regulation 7(4); and
  - (b) the authority shall before granting the permit consider any opinion on the draft that is issued under Article 10(1) of the Directive.
- (8) If the authority is minded to grant a storage permit—
- (a) the authority shall forward a draft of the proposed permit to the Department of the Environment; and
  - (b) the authority shall before granting the permit consider any opinion on the draft given by the Department of the Environment within one month of the date on which the draft permit was forwarded to it.

### **Content of storage permits**

- 9.—(1) A storage permit shall include at least the following—
- (a) the name and address of a single person who is a licence holder and who is designated as the operator of the storage site;

- (b) the precise location and delimitation of the storage site and storage complex, and any relevant information concerning the hydraulic unit;
  - (c) the operational requirements for storage, including—
    - (i) the total quantity of CO<sub>2</sub> authorised to be stored;
    - (ii) the reservoir pressure limits; and
    - (iii) the maximum injection rates and pressures;
  - (d) the provisions relating to acceptance and injection of CO<sub>2</sub>, including composition of the CO<sub>2</sub> stream;
  - (e) any other requirements relating to injection and storage that the authority considers necessary, in particular to prevent significant irregularities;
  - (f) requirements designed to prevent any undue interference with other uses of the area surrounding the storage site;
  - (g) the provisions relating to monitoring, including the monitoring plan;
  - (h) the provision relating to reporting, and notification of leakages and significant irregularities;
  - (i) the provisions relating to notification and implementation of changes, and to review and modification or revocation of the permit;
  - (j) the provisions relating to corrective measures, including the corrective measures plan;
  - (k) the conditions for closure of the storage site;
  - (l) the provisional post-closure plan; and
  - (m) the provisions relating to financial security.
- (2) In this regulation, “provisions” means the provisions contained in Schedule 2.

#### *Powers and duties of the authority*

### **Corrective measures**

- 10.**—(1) This regulation applies where—
- (a) a significant irregularity or a leakage has been detected; and
  - (b) the licence under which the storage permit is granted is still in force,
- but does not apply where the storage permit has been revoked.
- (2) Without prejudice to the obligations of the operator under the provisions in the storage permit included by virtue of regulation 9(1)(j) and paragraph 6 of Schedule 2, or to the powers of the authority under section 24 (licensing authority’s powers of direction),—
- (a) the authority may direct the operator to take any corrective measures (and any measures for the protection of human health) that the authority (after consulting the operator) considers necessary; and
  - (b) if the operator fails to take the measures so directed, the authority shall exercise its powers under paragraph (4).
- (3) The measures directed to be taken under paragraph (2)(a) may be additional to, or different from, those set out in the corrective measures plan.
- (4) Whether or not a direction has been given under paragraph (2) or under section 24—
- (a) the authority may at any time take such measures itself (or arrange for another person to take them on the authority’s behalf); and

(b) the reasonable costs of doing so shall be paid by the operator.

(5) Section 24(5) to (8) apply to action taken under paragraph (4) as they apply to action taken under section 24(4).

### **Review, modification and revocation of storage permits**

**11.**—(1) Subject to paragraph (2), where a notification is given under the provisions in a storage permit included by virtue of regulation 9(1)(i) and paragraph 4(1) of Schedule 2, the authority—

- (a) may make such modifications to a storage permit as the authority considers appropriate; and
- (b) shall notify the operator of—
  - (i) the modifications to be made;
  - (ii) the date on which the modifications are to come into effect; and
  - (iii) the date on which the change in question may be implemented.

(2) Where it appears to the authority that the matters so notified would amount to a substantial change, the authority shall—

- (a) make such modifications to a storage permit as the authority considers appropriate (and give a notification in accordance with paragraph (1)(b)); or
- (b) notify the operator that the change may not be implemented.

(3) The authority shall give a notification under paragraph (1)(b) or (2) on or before—

- (a) the date (“the target date”) on which the operator proposes to implement the change notified to the authority under the provisions in a storage permit included by virtue of regulation 9(1)(i) and paragraph 4(1) of Schedule 2; or
- (b) if the authority considers more time is required to allow it to give the notification, the later date notified by the authority under paragraph (4).

(4) The authority shall notify the operator of the later date—

- (a) no less than one week before the target date; or
- (b) if one or more later dates have already been notified by the authority, no less than one week before the date last notified.

(5) This paragraph applies where the authority becomes aware of—

- (a) any (or any risk of) leakages or significant irregularities;
- (b) any breach of the terms or conditions of the storage permit; or
- (c) any scientific finding or technological development which appears to have a bearing on the conduct of operations at the storage site.

(6) The authority shall consider whether to modify or revoke a storage permit—

- (a) where paragraph (5) applies; and
- (b) in any event, on the date (“the review date”) falling on the fifth anniversary of the grant of a storage permit, and subsequently on every tenth anniversary of the review date.

(7) Following that consideration, the authority may—

- (a) make such modifications to a storage permit as the authority considers appropriate; or
- (b) if it decides that modifications to a storage permit would be insufficient in the light of the matters referred to in paragraph (5), revoke the permit.

(8) Before making any modification to a storage permit or revoking a storage permit under this regulation, the authority shall consult the operator and any other licence holder.



### **Consequences of revocation of a storage permit**

**12.**—(1) This regulation applies where the authority has revoked a storage permit under regulation 11(7).

(2) The authority shall either—

- (a) close the storage site; or
- (b) consider any application for a new licence (and, if such a licence is granted, for a new storage permit) in respect of the storage site.

(3) Following the procedure under paragraph (2)(b)—

- (a) if no new storage permit is granted, the authority shall close the storage site (but the existing licence shall continue in force);
- (b) if a new storage permit is granted, the existing licence shall terminate on the date of that grant.

(4) Until the storage site is closed, or the new storage permit is granted, the authority is deemed to be the operator of the site for the purposes of the following obligations—

- (a) in relation to the acceptance and injection of CO<sub>2</sub>;
- (b) in relation to monitoring;
- (c) in relation to corrective measures;
- (d) in relation to the surrender of allowances under legislation implementing the ETS Directive; and
- (e) under legislation implementing Articles 5(1) and 6(1) of the Environmental Liability Directive.

(5) Where the storage site is closed under paragraph (2)(a) or (3)(a), the authority—

- (a) is deemed to be the operator of the storage site for the purposes of the obligations referred to in paragraph (4)(b) to (e); and
- (b) shall ensure that the storage site is sealed and the injection facilities removed (but this is without prejudice to the obligations of any person under Part 4 of the Petroleum Act 1998(14)).

(6) The holder of the existing licence shall pay to the authority any reasonable costs incurred in meeting the authority's obligations under paragraph (4) or (5); and section 24(6) and (7) apply to the recovery of such costs as they apply to the recovery of costs under section 24(5).

(7) In this regulation, "existing licence" means the licence under which the revoked storage permit was granted.

(8) The authority may consult the Department of the Environment in relation to the carrying out by the authority of the obligations referred to in paragraph (4)(a) to (e) and paragraph (5)(b).

### *Closure of storage site and post-closure period*

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

**13.**—(1) Before applying for a storage permit, a licence holder shall draw up a proposed provisional post-closure plan that is—

- (a) based on best practice; and
- (b) in accordance with Annex II to the Directive.

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(14) Section 30 of the Energy Act 2008 applies Part 4 of the Petroleum Act 1998 (c.17) to carbon dioxide installations (as defined by section 30(5))

- (2) Before granting a storage permit, the authority shall—
- (a) approve that proposed plan; or
  - (b) require the licence holder to make such modifications to it as the authority (after consulting the licence holder) considers necessary,

and the provisional post-closure plan is the plan so approved or modified.

- (3) The authority may—
- (a) approve a proposed post-closure plan submitted to it for approval in accordance with the provisions in the licence included by virtue of regulation 6 and paragraph 2(1) of Schedule 1; or
  - (b) require the operator to make such modifications to it as the authority (after consulting the operator) considers necessary,

and the post-closure plan is the plan so approved or modified.

(4) Where the authority is deemed to be the operator pursuant to regulation 12(5), the post-closure plan is the provisional post-closure plan with such modifications as the authority considers necessary.

### **Post-closure obligations**

- 14.** The closure of a storage site is without prejudice to the obligations of the operator—
- (a) under legislation implementing Articles 5 to 8 of the Environmental Liability Directive; or
  - (b) relating to the surrender of allowances under legislation implementing the ETS Directive.

### *Inspections and enforcement*

### **Inspections**

**15.—(1)** The authority shall carry out an inspection (a “routine inspection”) of a storage complex—

- (a) during the initial period—
  - (i) no later than one year from the date that period commences; and
  - (ii) subsequently, no later than one year from the date of the immediately previous inspection; and
- (b) during the post-closure period—
  - (i) no later than five years from the date that period commences; and
  - (ii) subsequently, no later than five years from the date of the immediately previous inspection.

- (2) A routine inspection shall include an examination of—
- (a) the injection and monitoring facilities; and
  - (b) the effects from the storage complex on the environment and human health.

- (3) The authority shall carry out an inspection of a storage complex if—
- (a) the authority becomes aware of—
    - (i) leakages or significant irregularities; or
    - (ii) a breach of the terms or conditions of the storage permit; or
  - (b) a complaint is made to the authority about the effects from the storage complex on the environment or human health, unless the authority is of the opinion that the complaint is frivolous or vexatious.

(4) The authority may carry out an inspection other than when required under paragraph (1) or (3) as the authority considers appropriate.

(5) An inspection carried out pursuant to paragraph (3) or (4)—

(a) does not constitute a routine inspection for the purposes of paragraph (1); but

(b) may be carried out simultaneously with a routine inspection.

(6) In this regulation, in relation to a storage complex—

(a) “initial period” means the period commencing on the date on which injection commences at the storage site and ending on the third anniversary of the date of closure of the storage site;

(b) “monitoring facilities” means facilities used for the carrying out of a programme of monitoring pursuant to the provisions in the storage permit included by virtue of regulation 9(1)(g) and paragraph 2 of Schedule 2;

(c) “post-closure period” means the period commencing on the day after the third anniversary of the date of closure of the storage site and ending on the date on which the relevant licence is terminated;

(d) “year” means a period of twelve months.

### **Inspectors**

**16.**—(1) Subject to paragraph (3), an inspector may exercise any of the powers set out in Schedule 3 to assist the authority in carrying out its functions under Chapter 3 or these Regulations, including—

(a) investigating whether—

(i) the provisions of a licence, storage permit or any consent granted under a licence; or

(ii) any requirements, restrictions or prohibitions imposed by or under Chapter 3 or these Regulations,

have been, or are being, complied with; and

(b) monitoring the effects of activities authorised by or under a licence or from a storage complex on the environment or human health.

(2) An inspector shall report to the authority in such manner as the authority may direct.

(3) Before exercising any of the powers set out in Schedule 3, an inspector shall on request produce evidence of appointment.

### **Inspection reports**

**17.**—(1) The authority shall prepare a written report (an “inspection report”) of the results of an inspection.

(2) An inspection report shall include—

(a) the authority’s assessment of whether or not, in respect of the storage complex inspected—

(i) the provisions of a licence, storage permit or any consent granted under a licence; and

(ii) any requirements, restrictions or prohibitions imposed by or under Chapter 3 or these Regulations,

have been, or are being, complied with; and

(b) a statement as to what action (if any) the authority considers is required to ensure such compliance.

(3) A statement made in an inspection report pursuant to paragraph (2)(b) does not preclude the authority from requiring the licence holder, operator or any other person to take any other action.

(4) The authority shall within two months of the completion of an inspection—

- (a) provide a copy of the inspection report to the operator of the relevant storage complex; and
- (b) make the inspection report available for inspection by the public.

## **Offences**

**18.**—(1) It is an offence for a person—

- (a) wilfully to obstruct an inspector in the exercise of the powers or duties conferred on the inspector by these Regulations;
- (b) without reasonable excuse, to fail to comply with a requirement imposed under Schedule 3 or to prevent another person from complying with such a requirement; or
- (c) knowingly or recklessly to give information which is false or misleading in a material particular where the information is given in purported compliance with any requirement imposed under Schedule 3 for the supply of information to an inspector.

(2) A person guilty of an offence under paragraph (1) is liable—

- (a) on summary conviction, to a fine not exceeding the statutory maximum; or
- (b) on conviction on indictment, to a fine.

(3) For the purposes of this regulation, section 20(2) of the Interpretation Act (Northern Ireland) 1954 applies with the omission of the words “the liability of whose members is limited”; and where the affairs of a body corporate are managed by its members, applies in relation to the acts or defaults of a member in connection with the member’s functions of management as if the member were a director of the body corporate.

(4) Where the commission by any person of an offence under this regulation is due to the act or fault of some other person, that other person may be charged with and convicted of the offence by virtue of this paragraph whether or not proceedings for the offence are taken against the first-mentioned person.

Sealed with the Official Seal of the Department of Enterprise, Trade and Investment on  
1st December 2015.



*Mike Thompson*  
A senior officer of the  
Department of Enterprise, Trade and Investment

## SCHEDULE 1

Regulation 6

### PROVISIONS TO BE INCLUDED IN A LICENCE

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

1.—(1) If a storage permit is granted under the licence in respect of a storage site then, subject to regulation 12 of the Storage of Carbon Dioxide (Licensing etc.) Regulations (Northern Ireland) 2015 (“the Regulations”), the operator shall close the storage site if the conditions referred to in regulation 9(1)(k) of the Regulations are met.

(2) The operator may close the 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 the storage site shall—

- (a) be made in writing and sent to the Department of Enterprise, Trade and Investment; and
- (b) contain the reasons why the operator proposes to close the storage site.

(4) A storage site shall not be closed under sub-paragraph (1) or (2) until the terms of the post-closure plan have been determined under regulation 13(3) of the Regulations.

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

2.—(1) Prior to the closure of the storage site in accordance with paragraph 1(1) or (2) the operator shall submit a proposed post-closure plan to the authority for approval.

(2) The proposed post-closure plan shall 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 shall 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 the storage site has been closed and until the licence is terminated, the operator shall 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 shall seal the storage site and remove the injection facilities and, where applicable, in accordance with Part 4 of the Petroleum Act 1998.

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

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

### **Interpretation**

5.—(1) In this licence the following expressions have the meanings given by regulation 2(3) of the Storage of Carbon Dioxide (Licensing etc.) Regulations (Northern Ireland) 2015—

- “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 of 29 April 2009 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” (in relation to a storage site);
- “corrective measures”;
- “CO<sub>2</sub> stream”;
- “leakage”;
- “significant irregularity”;
- “storage site”.

## SCHEDULE 2

Regulation 9(2)

### 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 shall consist overwhelmingly of carbon dioxide, and shall in particular satisfy the conditions in sub-paragraph (2).

(2) The CO<sub>2</sub> stream—

- (a) shall contain no waste or other matter added for the purposes of disposal;
- (b) may contain incidental substances or trace substances (to the extent permitted by any legislation applicable to those substances), but only if the concentration of all such substances are below 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 CO<sub>2</sub> stream the operator shall 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 shall 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 into, the storage site (including the composition of those streams).

## **Monitoring**

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

(2) Such monitoring shall 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;
  - (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 shall be based on the monitoring plan.

(5) The monitoring plan shall be updated in accordance with Annex II to the Directive, and in any event within five years 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

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- (d) improvements in best available technology.
  - (6) The updated plan shall 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 shall send to the authority a report in respect of each reporting period containing the information specified in sub-paragraph (5).
- (2) The report shall be sent to the authority no later than four 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 as is specified in the notice.
- (5) The information is—
- (a) the results of the monitoring carried out in accordance with the provisions of the storage permit (including details of the monitoring technology employed);
  - (b) the quantities, properties and composition of the CO<sub>2</sub> streams delivered to and injected into the storage site in the reporting period, and registered by the operator under paragraph 1(5);
  - (c) proof that the financial security required by paragraph 7 has come into effect and remains in force;
  - (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 shall immediately notify the authority.
- (7) If the operator becomes aware of any leakages or significant irregularities which imply the risk of leakage, the operator shall immediately notify the person who is the regulator in relation to the storage site for the purposes of the legislation implementing the ETS Directive.

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

- 4.—(1) The operator shall notify the authority of any change planned in the operation of the storage site, including any change concerning the operator.
- (2) A notification under sub-paragraph (1) shall 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 shall be given at least three months before the target date.



(4) If the change solely concerns the operator, the notification shall be given 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 11(4)(b) of the Regulations; or
- (b) the date notified by the authority in accordance with regulation 11(1)(b)(ii) of the Regulations.

(6) The change may not be implemented if the authority gives notification to that effect under regulation 11(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 referred to in sub-paragraph (5)(a) if the authority has not before then given notification under regulation 11(1)(b)(ii) or (2)(b) of the Regulations.

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

5. The permit shall be reviewed, and where necessary modified or (as a last resort) revoked, by the authority in accordance with regulation 11 of the Regulations.

### **Corrective measures**

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

(2) Subject to regulation 10, the measures taken shall include those set out in the corrective measures plan.

### **Financial security**

7.—(1) The operator shall 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;
- (b) is in force before the commencement of injection; and
- (c) subject to sub-paragraph (2), remains in force until the licence is terminated.

(2) If the storage permit is revoked, the financial security shall remain in force—

- (a) until a new storage permit is granted; or
- (b) 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 each report made by the operator in accordance with paragraph 3(1) to (5), the authority shall 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 shall notify the operator of the new amount that is required; and
- (b) if the secured amount is less than that new amount, the operator shall within three months of receiving that notification—
  - (i) ensure that the secured amount is increased to the new amount; and
  - (ii) furnish evidence of such increase to the authority.

(5) The obligations are—

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- (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 10(4)(b) or 12(6);
  - (c) any obligations of the operator arising in respect of the storage site under legislation implementing the ETS Directive; and
  - (d) the obligation to provide the financial contribution to the authority in accordance with Article 20(1) of the 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.—(1) In this storage permit—
- (a) “the Regulations” means the Storage of Carbon Dioxide (Licensing etc.) Regulations (Northern Ireland) 2015;
  - (b) the following expressions have the meanings given by regulation 2(3) of the Regulations;
    - “the authority”;
    - “CO<sub>2</sub>”;
    - “corrective measures plan”;
    - “the Directive”;
    - “the ETS Directive”;
    - “financial security”;
    - “injection”;
    - “licence”;
    - “monitoring plan”;
    - “operator”;
    - “storage permit”.
- (2) The following expressions have the meanings given by Article 3 of the Directive (and cognate expressions are to be construed accordingly)—
- “closure” (in relation to 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”;

“waste”.

### SCHEDULE 3

Regulation 16(1)

#### POWERS OF INSPECTORS

1. The powers of an inspector are—
  - (a) to enter, at any reasonable time (or, in an emergency, at any time) any premises which the inspector has reason to believe it is necessary to enter;
  - (b) on entering any premises by virtue of sub-paragraph (a), to—
    - (i) be accompanied by any other inspector or person; and
    - (ii) take any equipment or materials,as the inspector considers necessary for the purpose for which entry is made;
  - (c) to make such examination and investigation as the inspector considers necessary, and for this purpose to install or maintain monitoring or other apparatus on the premises;
  - (d) to direct that the premises or any part of them, or any thing in or on them, shall be left undisturbed (whether generally or in particular respects) for so long as is reasonably necessary for the purpose of any examination or investigation under sub-paragraph (c);
  - (e) to take such measurements and photographs and make such recordings as the inspector considers necessary for the purpose of any examination or investigation under sub-paragraph (c);
  - (f) to take samples or cause samples to be taken of any thing found in or on the premises or in any air, water, land or seabed (including the subsoil of the seabed) in, or in the vicinity of, the premises;
  - (g) subject to paragraphs 2 and 3, in the case of any thing found in or on the premises, to cause it to be dismantled or subjected to any process or test (but not so as to damage or destroy it, unless that is necessary);
  - (h) in the case of any thing referred to in sub-paragraph (g), to take possession of it and detain it for so long as is necessary for all or any of the following purposes—
    - (i) to examine it, or cause it to be examined, and do to it anything which the inspector has power to do under that sub-paragraph;
    - (ii) to ensure that it is not tampered with before examination of it is completed; and
    - (iii) to ensure that it is available for use as evidence in any proceedings for an offence under these Regulations or under Chapter 3.
  - (i) to require any person whom the inspector has reasonable cause to believe is able to give any information relevant to any examination or investigation under sub-paragraph (c) to provide the inspector with such information as the inspector may reasonably require for the purpose of any such examination or investigation;
  - (j) to require the production of (or where the information is recorded in computerised form, the furnishing of extracts from), and to inspect and take copies of (or of any entry in)—
    - (i) any records which are required to be kept by virtue of any provision of a licence or storage permit; or
    - (ii) any records which the inspector considers it necessary to see for the purposes of an examination or investigation under sub-paragraph (c); and

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(k) to require any person to afford the inspector such facilities and assistance with respect to any matters or things within that person's control or in relation to which that person has responsibilities as the inspector considers are necessary to enable the inspector to exercise any of the powers conferred on the inspector by these Regulations and this Schedule.

2. Where an inspector proposes to exercise the power conferred by paragraph 1(g) in the case of any thing found in or on any premises, the inspector shall, if so requested by a person who at the time is present on and has responsibilities in relation to those premises, cause anything which is to be done by virtue of that power to be done in the presence of that person.

3. Before exercising the power conferred by paragraph 1(g), an inspector shall consult—

- (a) such persons having duties on the premises where the thing is to be dismantled or subjected to the process or test; and
- (b) such other persons,

as appear to the inspector appropriate for the purpose of ascertaining what dangers, if any, there may be in doing anything which the inspector proposes to do or cause to be done under the power.

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## EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations form part of the implementation in Northern Ireland of Directive [2009/31/EC](#) of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide (OJ No L140, 5.6.2009, p. 114) (“the Directive”).

Part 1, Chapter 3, of the Energy Act 2008 (c.32, as amended by [S.I. 2011/2453](#)) (“the Act”) establishes a licensing regime for the storage of carbon dioxide. Section 17 of the Act prohibits the storage of carbon dioxide (with a view to its permanent disposal) except in accordance with a licence granted under section 18(1) of that Act. The Department of Enterprise, Trade and Investment (“the Department”) is the licensing authority for storage onshore Northern Ireland and within the internal waters of the United Kingdom adjacent to Northern Ireland. The Secretary of State is the licensing authority for storage in the territorial sea adjacent to Northern Ireland but the Department, as well as the Secretary of State, is also the licensing authority for storage in a place part of which is within Northern Ireland or its internal waters and the rest of which is in the territorial sea adjacent to Northern Ireland. These Regulations relate solely to licences granted by the Department and do not apply to the category of licence which authorises the exploration of areas generally. Permits for the operation of carbon dioxide storage sites are granted under section 18(1) licences.

These Regulations implement Article 2 (in part) and Articles 3 to 17 and 19 of the Directive concerning: (1) the granting of permits for the operation of carbon dioxide storage sites (and related exploration activities); (2) the obligations of the storage operator (for example in relation to monitoring, reporting and corrective measures) whilst storage activities are taking place; (3) the operator's continuing obligations for a period after the closure of the storage site; and (4) the inspection of carbon dioxide storage complexes.

Regulation 2(3) and (4) provides definitions for terms used in the Regulations.

Regulation 3 prevents the licensing of carbon dioxide storage in the water column.

Regulation 4 sets out the requirements for applying for a licence under the Act. The application may be for a licence with, or without, an “appraisal term” (during which the holder will have the right to carry on exploration activities with a view to selecting a site for carbon dioxide storage). If an application is made for a licence without an appraisal term, reasons must be given in the application.

Regulation 5 limits the length of the appraisal term to the minimum necessary and identifies when the licence shall cease and determine.

Regulation 6 requires a licence to include the provisions set out in Schedule 1.

Regulation 7 sets out requirements for an application for a permit to store carbon dioxide.

Regulation 8 sets out conditions for the grant of a storage permit, and Regulation 9 sets out minimum requirements for the content of such permits. In particular, a storage permit must designate a single licence holder as the operator of the storage site, provide details of the storage site and surrounding complex, and of the operational requirements for injection and storage. Also to be included are the provisions set out in Schedule 2.

Regulation 10 enables the licensing authority to direct the operator to take corrective measures, in the event of a significant irregularity or leakage, and enables (or in some cases requires) the authority to take such measures itself and to recover reasonable costs from the operator. This is in addition to the operator’s obligations to take corrective measures under the storage permit, and to the authority’s powers under section 24 of the Act (which allows directions to be given following the breach of a licence). Such measures also include measures for the protection of human health.

Regulation 11 enables the licensing authority to modify or revoke the storage permit in certain circumstances. By regulation 11(1) such a modification may be made where a change is planned by the operator, and by regulation 11(2) a modification must be made where the change appears to the authority to be substantial; alternatively in such a case the authority may prohibit the change. (Such planned changes are required to be notified under paragraph 4 of Schedule 2). Regulation 11(5) and (6) set out circumstances in which the authority must consider whether to modify or revoke the permit. This duty arises where the authority receives certain information – for instance that permit conditions have been breached or that there have been leakages or significant irregularities – and in any event five years after the grant of the permit (and then every ten years).

Regulation 12 deals with the consequences of a storage permit being revoked. The licensing authority may either close the storage site immediately, or first consider applications for a new licence and a new storage permit in respect of the site. If a new storage permit is granted, the existing licence terminates and with it the previous operator’s obligation to meet the authority’s costs. In all other cases that obligation continues in respect of the store that is now closed, but the authority takes over responsibility for performing the post-closure obligations.

Before a site is closed, the definitive version of a “post-closure plan” must be approved by the authority under Regulation 13.

Regulation 14 deals with liabilities of the operator after the site has been closed. Its obligations to remedy environmental damage under the Environmental Liability Directive will continue, as will those to surrender allowances under the greenhouse gas emission trading scheme established by Directive [2003/87/EC](#) of the European Parliament and of the Council of 13 October 2003. Such obligations continue until the licence is terminated, as does the obligation to maintain a financial security (see paragraph 7 of Schedule 2).

Regulations 15 to 17, provide for the routine inspection of carbon dioxide storage complexes and for additional inspections. Reports of the results of those inspections must be produced, provided to the operator and made available for public inspection. The licensing authority may appoint inspectors, whose powers are set out in Schedule 3.

Regulation 18 creates offences concerning the obstruction of inspectors, failure to comply with requirements imposed under the regulations and the provision of false information in connection with an investigation.

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Schedule 1 contains provisions which must be included in any licence granted by the licensing authority. These are provisions concerning the circumstances in which the storage site is to be closed by the operator, the preparation of the post-closure plan and the liabilities of the operator after the site has been closed. Closure takes place either under the conditions laid down in the storage permit, or on application to the authority (paragraph 1). The proposed post-closure plan submitted by the operator to the authority for approval must be based on the provisional version that was approved when the storage permit was granted, updated as necessary (paragraph 2). The operator must continue to monitor the site, and to comply with its reporting and notification obligations and its obligations to take corrective measures (paragraph 3). The operator must seal the site and remove the injection facilities, where applicable, in accordance with its decommissioning obligations under Part 4 of the Petroleum Act 1998 (c. 17) (paragraph 3).

Schedule 2 contains provisions which must be included in any storage permit granted by the licensing authority. These are provisions concerning: the composition of the carbon dioxide streams that may be injected into the store, including the obligation of the operator to maintain a register of the quantities and properties of the streams injected (paragraph 1); the monitoring of the storage complex and injection facilities, including the drawing up and approval of a monitoring plan (paragraph 2); the submission of periodic reports on monitoring, injection, financial security, and any other information that the authority considers relevant, and the notification of leakages or significant irregularities (paragraph 3); the notification and implementation of changes concerning the operator or the operation of the storage site (paragraph 4); the review and modification or revocation of the permit (paragraph 5); the measures that are to be taken in the event of leakages or significant irregularities (paragraph 6); and the financial security that is to be maintained by the operator (paragraph 7).

Schedule 3 sets out the powers and duties of inspectors appointed under section 27 of the Act. An inspector has power to enter any premises which the inspector has reason to believe it is necessary to enter, and may be accompanied and take any necessary equipment or materials. The powers exercisable by an inspector on entering any premises are set out in paragraph 1 of the Schedule. The inspector must, if requested, exercise the power to dismantle any thing found on the premises or to subject it to any process or test in the presence of a person who at the time is present and has responsibilities in relation to the premises (paragraph 2). The inspector must also, before exercising the power to dismantle the thing or subject it to any process or test, consult with such persons having duties on the premises and such other persons as appear to the inspector appropriate for the purpose of ascertaining what dangers, if any, there may be in doing anything under the power (paragraph 3).