
 STATUTORY INSTRUMENTS

1996 No. 551**HEALTH AND SAFETY****Gas Safety (Management) Regulations 1996**

**[as applied to the Island by the Gas Safety (Installation, Use and Management)
(Application) Order 2022]**

<i>Made</i> - - - -	<i>4th March 1996</i>
<i>Laid before Parliament</i>	<i>8th March 1996</i>
<i>Coming into force —</i>	
<i>All regulations except regulation 8-</i>	<i>1st April 1996</i>
<i>Regulations except regulation 8-</i>	<i>31st October 1996</i>

Index

Regulation	Page
1 Citation and commencement	3
2 Interpretation.....	3
3 Duties on persons conveying gas	5
4 Revision of safety cases.....	6
5 Duty to conform with safety case	6
6 Co-operation.....	7
7 Gas escapes and investigations.....	7
8 Content and other characteristics of gas.....	10
9 Keeping of documents	10
11 Exemptions	11
12 Repeals, revocations and amendment	12
SCHEDULE 1	13
PARTICULARS TO BE INCLUDED IN SAFETY CASE OF A PERSON CONVEYING GAS	13
SCHEDULE 2	17
PARTICULARS TO BE INCLUDED IN SAFETY CASE OF A NETWORK EMERGENCY CO-ORDINATOR	17

SCHEDULE 3	18
CONTENT AND OTHER CHARACTERISTICS OF GAS	18



The Secretary of State in exercise of the powers conferred on him by sections 15(1), (2), (3)(a), (4)(a), (5)(b), (6)(b) and 82(3)(a) of, and paragraphs 1(1)(c), 15(1), 16 and 21(a) of Schedule 3 to, the Health and Safety at Work etc. Act 1974(1) (“the 1974 Act”) and of all other powers enabling him in that behalf and for the purpose of giving effect without modifications to proposals submitted to him by the Health and Safety Commission under section 11(2)(d) of the 1974 Act after the carrying out by the said Commission of consultations in accordance with section 50(3) of that Act, hereby makes the following Regulations:—

1 Citation and commencement

These Regulations may be cited as the Gas Safety (Management) Regulations 1996 and shall come into force on 1st April 1996 except regulation 8 which shall come into force on 31st October 1996.

2 Interpretation

(1) In these Regulations, unless the context otherwise requires —

“**the 1998 Regulations**” means the Gas Safety (Installation and Use) Regulations 1998¹ as they have effect in the Island by virtue of the Gas Safety (Installation, Use and Management) (Application) Order 2021²;

“**distribution main**” has the same meaning as in regulation 2(1) of the 1998 Regulations;

“**electricity generating station**” includes an electricity generating station used for generating electricity for use on the same premises on which it is situated;

“**emergency control**” has the same meaning as in regulation 2(1) of the 1998 Regulations;

“**emergency service provider**” means a person appointed pursuant to regulation 7(11);

“**gas**” means any substance in a gaseous state which consists wholly or mainly of methane;

“**gas fittings**” means gas fittings as defined in regulation 2(1) of the 1998 Regulations as if the phrase “(other than the purpose of an industrial process carried out on industrial premises)” did not appear in that definition;

“**gas processing facility**” means any gas processing facility which—

- (a) blends or purifies gas, removes from gas any of its constituent gases or separates from gas any oil or water; and
- (b) is situated at a terminal which receives gas directly or indirectly from a gas production facility;

¹ SI 1998/2451

² SD 2021/0363

“**gas production facility**” means a facility for the extraction of gas from strata or for the manufacture of gas;

“**installation pipework**” has the same meaning as in regulation 2(1) of the 1998 Regulations;

“**interconnector**” means a pipeline used for the conveyance of gas to the Isle of Man from another country;

“**network**” shall be construed in accordance with paragraphs (2) to (4);

“**network emergency co-ordinator**” shall be construed in accordance with paragraphs (2) and (3) of regulation 3;

“**pipe**” includes a pipeline, distribution main, service pipe and any ancillary plant connected to a pipe and used for the conveyance of gas, but it does not include a pipe downstream of an emergency control;

“**safety case**” shall be construed in accordance with paragraph (5);

“**service pipe**” has the same meaning as in regulation 2(1) of the 1998 Regulations;

“**supply emergency**” means an emergency endangering persons and arising from a loss of pressure in a network or any part thereof.

- (2) Any reference in these Regulations to a network is, subject to paragraphs (3) and (4), a reference to a connected network of pipes used for the conveyance of gas from a gas processing facility, a storage facility or an interconnector, except a connected network of pipes used exclusively for conveying gas to non-domestic premises.
- (3) A network does not include pipes upstream from a junction on a pipe used exclusively for conveying gas to an electricity generating station; and in this paragraph the reference to a junction on a pipe used exclusively for conveying gas to an electricity generating station is a reference to the point where the upstream end of the pipe joins a pipe used for another purpose.
- (4) Where gas which does not conform with the requirements referred to in regulation 8(1) is conveyed from a gas processing facility for treatment or blending so as to bring it into conformity with those requirements, any pipes used exclusively for conveying gas from that facility to the point where the gas is treated or blended or to non-domestic premises or to both, shall not be treated as part of a network for the purposes of these Regulations.
- (5) Any reference in these Regulations to a safety case is a reference to a document containing the particulars required by the provision of these Regulations pursuant to which the safety case is prepared, and —
 - (a) insofar as the document contains other particulars it shall not be treated as part of the safety case for the purposes of these Regulations;
 - (b) nothing in these Regulations shall require the particulars to relate to a source of risk other than the gas itself.

- (6) Any reference in these Regulations to the Department accepting a safety case or revision thereof is a reference to the Department notifying in writing the person who prepared it that it is satisfied with the case for health and safety made out in it.
- (7) Any reference in these Regulations to the conveyance of gas is a reference to the conveyance of gas through pipes.
- (8) Any reference in these Regulations to conveying gas in a network includes a reference to conveying gas in any part of the network.
- (9) Any reference in these Regulations to preventing a supply emergency is a reference to preventing a supply emergency from occurring or continuing.
- (10) In these Regulations any reference, in relation to a network, to the network emergency co-ordinator is a reference to the network emergency co-ordinator who has prepared and had accepted a safety case relating to that network pursuant to regulation 3(2).
- (11) Any reference in these Regulations to a person supplying or conveying gas, preparing a safety case or carrying out work in relation to a gas fitting is a reference to a person who does so in the course of a business or other undertaking carried on by him.
- (12) Unless the context otherwise requires, any reference in these Regulations to —
 - (a) a numbered regulation or Schedule is a reference to the regulation or Schedule in these Regulations so numbered;
 - (b) a numbered paragraph is a reference to the paragraph so numbered in the regulation or Schedule in which the reference appears.

3 Duties on persons conveying gas

- (1) No person shall convey gas in a network unless —
 - (a) he has prepared a safety case containing the particulars specified in Schedule 1 and that safety case has been accepted by the Department; and
 - (b) where any other person is conveying gas in that network, there is a sole network emergency co-ordinator for the network.
- (2) For the purposes of these Regulations a network emergency co-ordinator is, subject to paragraph (3), a person who has prepared a safety case containing the particulars specified in Schedule 2 and has had that safety case accepted by the Department.
- (3) Where a network emergency co-ordinator has given written notice to the Department and to all persons conveying gas in the network that he no longer intends to act in that capacity, he shall not be the network emergency co-ordinator for the purposes of these Regulations from the

time such notice takes effect (which shall not be less than 6 months after it was given).

- (4) Nothing in these Regulations shall prevent a person who conveys gas in a network from also being the network emergency co-ordinator.

4 Revision of safety cases

- (1) A person who has prepared a safety case pursuant to these Regulations shall revise its contents whenever it is appropriate, but nothing in this paragraph shall require him to have the revision accepted by the Department.
- (2) Where a revision proposed to be made under paragraph (1) will render the safety case materially different from the last version accepted by the Department pursuant to these Regulations, the revision shall not be made unless the Department has accepted the revision, and for the purposes of this paragraph in determining whether a proposed revision will render the safety case materially different from the version referred to above, regard shall be had to the cumulative effect of that proposed revision and any previous revisions made under paragraph (1) but not subject to this paragraph.
- (3) A person who has prepared a safety case which has been accepted by the Department pursuant to these Regulations shall make a thorough review of its contents at least every three years.

5 Duty to conform with safety case

- (1) Where a person has prepared and has had accepted a safety case pursuant to these Regulations he shall ensure, so long as he conveys gas in the network to which the safety case relates or remains a network emergency co-ordinator, as the case may be, that the procedures and arrangements described in the safety case and any revision thereof are followed.
- (2) In criminal proceedings for a contravention of paragraph (1) it shall be a defence for the accused to prove that —
 - (a) in the particular circumstances of the case it was not in the best interests of health and safety to follow the procedures or arrangements concerned and there was insufficient time to revise the safety case pursuant to regulation 4; or
 - (b) the commission of the offence was due to a contravention by another person of regulation 6 and the accused had taken all reasonable precautions and exercised all due diligence to ensure that the procedures or arrangements were followed.

6 Co-operation

- (1) Every person to whom this paragraph applies shall co-operate so far as is necessary with a person conveying gas in a network and with a network emergency co-ordinator to enable them to comply with the provisions of these Regulations.
- (2) Paragraph (1) applies to —
 - (a) a person conveying gas in the network;
 - (b) an emergency service provider;
 - (c) the network emergency co-ordinator in relation to a person conveying gas;
 - (d) a person conveying gas in pipes which are not part of a network by virtue of regulation 2(3) or (4).
- (3)
- (4) A person conveying gas in a network may, subject to paragraph (5), direct a person not to consume gas for the period specified in the direction.
- (5) A direction under paragraph (4) may —
 - (a) only be given where it is necessary to prevent a supply emergency or to prevent danger arising from the use of gas not conforming with the requirements of regulation 8;
 - (b) be given orally or in writing and may be withdrawn at any time.
- (6) Where a direction is given to a person pursuant to paragraph (4), that person shall comply with it during the period specified in the direction except that this shall not require him to comply with a direction after it has been withdrawn.
- (7) In criminal proceedings for a contravention of paragraph (6) it shall be a defence for the accused to prove that he had no knowledge of the direction.
- (8) A person who conveys gas in a network shall, where he is requested to do so by a person proposing to carry out work in relation to a gas fitting, provide him with information about the operating pressures of the gas at the outlet of a service pipe.

7 Gas escapes and investigations

- (1) It shall be the duty of Manx Gas Limited to provide a continuously manned telephone service (which shall be contactable within the Isle of Man by the use of one telephone number) for enabling persons to report an escape of gas from a network or from a gas fitting supplied with gas from a network.

- (2) Where Manx Gas Limited is notified of such an escape of gas it shall, if it is not responsible for preventing the escape under paragraphs (4) or (5), report it forthwith to the person who is.
- (3) A person referred to in regulation 6(2)(a) to (c) and the holder of a licence issued under section 7A(1) of the Gas Act 1986 who discovers or is notified of any such escape of gas (other than by virtue of a report made to him pursuant to paragraph (2)) shall report it forthwith to Manx Gas Limited.
- (4) Where any gas escapes from a network the person conveying the gas in the part of the network from which the gas escapes shall, as soon as is reasonably practicable after being so informed of the escape, attend the place where the gas is escaping, and within 12 hours of being so informed of the escape, he shall prevent the gas escaping.
- (5) Where any gas escapes from a gas fitting supplied with gas from a network, the person conveying the gas in the part of the network immediately upstream of the emergency control for the supply of gas to that fitting shall, as soon as is reasonably practicable after being so informed of the escape, attend the place where the gas is escaping, and within 12 hours of being so informed of the escape, he shall prevent the gas escaping.
- (6) Where a person conveying gas in a network has reasonable cause to suspect that gas conveyed by him which has escaped has entered, or may enter, any premises, he shall, so far as is reasonably practicable, take all the steps necessary to avert danger to persons from such entry.
- (7) If the responsible person for any premises knows or has reason to suspect that gas is escaping from a gas fitting in those premises supplied with gas from a network he shall immediately take all reasonable steps to cause the supply of gas to be shut off at such place as may be necessary to prevent further escape of gas.
- (8) If gas continues to escape into those premises after the supply of gas has been shut off or when a smell of gas persists, the responsible person for the premises discovering such escape or smell shall immediately give notice of the escape or smell to Manx Gas Limited.
- (9) Where an escape of gas has been stopped by shutting off the supply, no person shall cause or permit the supply to be re-opened (other than in the course of repair) until all necessary steps have been taken to prevent a recurrence of such escape.
- (10) In any proceedings against a person for an offence consisting of a contravention of paragraphs (4) or (5) above it shall, in so far as the contravention is not preventing the escape of gas within the period of 12 hours referred to in those paragraphs, be a defence for the person to prove that it was not reasonably practicable for him effectually to prevent the gas from escaping within that period, and that he did effectually prevent the escape of gas as soon as it was reasonably practicable for him to do so.

- (11) A person conveying gas may appoint another person to act on his behalf to prevent an escape of gas, and where he does so in advance of discovering or being notified of such an escape —
- (a) he shall notify Manx Gas Limited of the name of the person appointed;
 - (b) the appointee shall in relation to the escape be responsible for complying with paragraphs (4) to (6) in substitution for the person conveying the gas, and paragraph (6) shall have effect as if the reference to the person conveying gas having reasonable cause to suspect that the gas has entered or may enter premises were a reference to the appointee having such cause.
- (12) Where an escape of gas from a gas fitting on domestic premises has resulted in a fire or explosion, the person conveying the gas in the part of the network immediately upstream of the emergency control for the supply of gas to that fitting shall, as soon as is reasonably practicable after receiving notice of the fire or explosion, cause an investigation to be carried out so as to establish, so far as is reasonably practicable, whether the escape was from installation pipework or from an, and if so which, appliance.
- (13) Where an escape of gas from a network has or was likely to have resulted in a fire or explosion, the person conveying the gas in the part of the network where the gas escaped shall, as soon as is reasonably practicable after receiving notice of the escape, cause an investigation to be carried out so as to establish the source of the escape and, so far as is reasonably practicable, the reason for it.
- (14) Where an incident notifiable under regulation 6(1) of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1985 as they have effect in the Island by virtue of the Health and Safety (Reporting of Injuries Etc.) Order 1992³ has arisen as a result of an escape of carbon monoxide gas from incomplete combustion of gas in a gas fitting, the person who supplied the gas shall, as soon as is reasonably practicable after receiving notice of the incident, cause an investigation to be carried out so as to establish, so far as is reasonably practicable, the cause of the escape and accumulation of the carbon monoxide gas.
- (15) Where a person who conveys gas receives notice of an incident referred to in paragraph (14), he shall, as soon as is reasonably practicable, inform the relevant gas supplier of that fact.
- (16) A person who causes an investigation to be carried out pursuant to paragraphs (12), (13) or (14) shall —
- (a) ensure that the individuals who carry it out are competent;

³ GC 518 No 92

- (b) notify the Department before the investigation begins of the intention to carry it out;
 - (c) ensure that a report of the investigation is prepared and a copy of it is sent to the Department as soon as is reasonably practicable after the investigation has been completed.
- (17) In this Regulation —
- (a) “the responsible person” has the same meaning as in regulation 2(1) of the 1998 Regulations;
 - (b) any reference to an escape of gas from a gas fitting includes a reference to an escape or emission of carbon monoxide gas resulting from incomplete combustion of gas in such a fitting;
 - (c) any reference to a fire or explosion of gas is a reference to an unintended fire or explosion of gas;
 - (d) any reference to a person supplying gas does not include a reference to a person to whom the gas is supplied and who provides it for use in a flat or part of premises let by him.

8 Content and other characteristics of gas

- (1) No person shall, subject to paragraphs (2) to (4), convey gas in a network unless the gas conforms with the requirements specified in Part I of Schedule 3.
- (2) The network emergency co-ordinator may, where it is necessary to prevent a supply emergency and in accordance with the arrangements specified in his safety case pursuant to paragraph 3(d) of Schedule 2, authorise, for the period specified in the authorisation, gas not conforming with the requirements specified in Part I of Schedule 3 to be conveyed in the network if the gas conforms with the requirements specified in Part II of that Schedule.
- (3) An authorisation under paragraph (2) may be given orally or in writing and may be withdrawn at any time.
- (4) Where only one person conveys gas in a network, he may, where it is necessary to prevent a supply emergency and in accordance with the arrangements specified in his safety case pursuant to paragraph 19 of Schedule I, convey gas which does not conform with the requirements specified in Part I of Schedule 3 if the gas conforms with the requirements specified in Part II of that Schedule.
- (5) A person who conveys gas in a network shall ensure that suitable and sufficient tests are carried out to ensure that the gas conforms with the requirements of paragraphs (1), (2) or (4), as appropriate.

9 Keeping of documents

- (6) A person who prepares a safety case pursuant to these Regulations shall —

- (a) ensure that when the safety case is sent to the Department for acceptance it is notified of an address in the Isle of Man for the purposes of sub-paragraphs (b) to (f) below;
 - (b) keep the accepted safety case and any revision thereof or a copy thereof at that address;
 - (c) keep each audit report made by him or a copy thereof at that address;
 - (d) ensure that a record is made of any action taken in consequence of such an audit report and keep that record or a copy thereof at that address;
 - (e) ensure that a report is made of every review carried out by him pursuant to regulation 4(3) and ensure that a copy is sent to the Department;
 - (f) keep such report or a copy thereof at that address; and
 - (g) ensure that a record is made of every test carried out pursuant to regulation 8(5) in relation to gas he conveys and keep that record or a copy thereof at that address.
- (7) Each report and record required to be kept by paragraph (1) shall be kept for a period of 3 years after it has been made, and the safety case and revision shall be kept for so long as it is current.
- (8) It shall be sufficient compliance with paragraph (1) for the information in the documents to be kept at the address notified on film or by electronic means provided that the information is capable of being reproduced as a written copy at that address and it is secure from loss or unauthorised interference.
- (9) Where a person has notified an address pursuant to sub-paragraph (a) of paragraph (1), he may notify to the Department a different address in the Isle of Man for the purposes of the provisions referred to in that sub-paragraph, and where he does so references in those provisions and in paragraph (3) where applicable to the address notified shall be construed as the address in the last notification made under this paragraph.
- (10) In this regulation “audit report” means a report made pursuant to the arrangements referred to in paragraph 11 of Schedule 1 or paragraph 4 of Schedule 2 (to the extent that the later mentioned paragraph relates to arrangements for audit).

11 Exemptions

- (1) Subject to paragraph (2), the Department may, by a certificate in writing, exempt any person or class of persons from any requirement or prohibition imposed by these Regulations, and any such exemption may be granted subject to conditions and to a limit of time and may be revoked at any time by a certificate in writing.

- (2) The Department shall not grant any such exemption unless, having regard to the circumstances of the case and in particular to —
- (a) the conditions, if any, which it proposes to attach to the exemption; and
 - (b) any other requirements imposed by or under any enactment which apply to the case;

it is satisfied that the health and safety of persons likely to be affected by the exemption, will not be prejudiced in consequence of it.

12 Repeals, revocations and amendment

- (1) Section 8 (standards of quality) of the Gas Regulation Act 1995 is hereby repealed.
- (2) Paragraphs 9 (prevention of gas escape) and 10 (information as to escapes of gas) of Schedule 2 to the Gas Regulation Act 1995 are hereby repealed.

MADE 4TH MARCH 1996

PAUL BERESFORD

*Parliamentary Under Secretary of State,
Department of the Environment*

SCHEDULE 1

[Regulation 3(1)]

**PARTICULARS TO BE INCLUDED IN SAFETY CASE OF A PERSON
CONVEYING GAS****General**

- (1) Name and address of the person preparing the safety case (in this Schedule referred to as “the duty holder”).
- (2) A description of the operation intended to be undertaken by the duty holder.
- (3) A general description of the plant and premises the duty holder intends to use in connection with the operation including, in particular, the geographical location where any pipes he uses joins pipes used by other persons for conveying gas.
- (4) Particulars of any –
 - (a) technical specifications;
 - (b) procedures or arrangements relating to operation and maintenance,which the duty holder intends to follow in connection with the operation he intends to undertake insofar as they affect the health and safety of persons.

Safety Management

- (5) A statement of the significant findings of the risk assessment he has made pursuant to regulation 3 of the Management of Health and Safety at Work Regulations 2003, and particulars of the arrangements he has made in accordance with regulation 5(1) thereof.
- (6) Particulars to demonstrate that the management system of the duty holder is adequate to ensure that the relevant statutory provisions will (in respect of matters within his control) be complied with in relation to the operation he intends to undertake.
- (7) Particulars to demonstrate that the duty holder has established adequate arrangements for ensuring the competence of his employees in health and safety matters.
- (8) Particulars to demonstrate that the duty holder has established adequate arrangements for managing work carried out by persons who are not his employees on or in relation to plant or premises which he owns or controls.

- (9) Particulars to demonstrate that the duty holder has established adequate arrangements for passing information relevant to health and safety to persons within his undertaking.
- (10) Particulars to demonstrate that the duty holder has established adequate arrangements for passing and receiving information relevant to health and safety to and from other persons who have duties under these Regulations.
- (11) Particulars to demonstrate that the duty holder has established adequate arrangements for audit and the making of any necessary reports.

Co-operation

- (12) Particulars of the arrangements the duty holder has established to enable him to comply with regulation 6 (co-operation) including (except where he is the network emergency co-ordinator) particulars of the arrangements he has established to ensure that any directions given to him by the network emergency co-ordinator are followed.

Gas escapes and investigations

- (13) Particulars of the arrangements —
 - (a) the duty holder and any emergency service provider appointed by him have established to enable him or the provider, as the case may be, to comply with regulation 7(4) to (6);
 - (b) the duty holder has established to appoint emergency service providers.
- (14) Particulars to demonstrate that the duty holder has established adequate arrangements to enable him to comply with paragraphs (12), (13), (15) and (16) of regulation 7, for co-ordinating the investigations he causes to be carried out pursuant to that regulation with other investigations carried out pursuant thereto, and for participating in such other investigations.

Content and other characteristics of gas

- (15) Particulars to demonstrate that the duty holder has established adequate arrangements to ensure that all gas he conveys complies with regulation 8.

Continuity of supply

- (16) Particulars to demonstrate that the duty holder has established adequate arrangements to minimise the risk of a supply emergency.
- (17) Particulars to demonstrate that the duty holder has established adequate arrangements to ensure that the gas he conveys will be at an adequate pressure when it leaves the part of the network used by him.

Supply emergencies

- (18) Particulars to demonstrate that the duty holder has established adequate arrangements for dealing with supply emergencies or other incidents which could endanger persons.
- (19) Where the duty holder is the only person conveying gas in a network, particulars to demonstrate that he has established adequate arrangements to decide when and for how long gas not conforming with the requirements of regulation 8(1) should be conveyed in the network pursuant to regulation 8(4).
- (20) Without prejudice to paragraph 18 above, particulars of the procedures that the duty holder has established to discontinue safely supply to consumers, when it is known there is insufficient gas to satisfy demand.
- (21) Particulars of the procedures that the duty holder has established to restore safely the gas supply to consumers, following an interruption in supply.

Interpretation

In this Schedule —

- (a) “audit” means systematic assessment of the adequacy of the management system to achieve the purpose referred to in paragraph 6 carried out by persons who are sufficiently independent of the system (but who may be employed by the duty holder) to ensure that such assessment is objective;
- (b) “management system” means the organisation and arrangements established by the duty holder for managing his undertaking;
- (c) any reference to an operation intended to be undertaken by the duty holder is a reference to his intended operation of conveying gas in a network.

SCHEDULE 2

[Regulation 3(2)]

**PARTICULARS TO BE INCLUDED IN SAFETY CASE OF A NETWORK
EMERGENCY CO-ORDINATOR**

- (1) Name and address of the person preparing the safety case (in this Schedule referred to as “the duty holder”).
- (2) A general description of the network to which the safety case relates, including the geographical location of where pipes used by different persons conveying gas in the network join.
- (3) Particulars to demonstrate that the duty holder has established adequate arrangements for co-ordinating the actions to be taken to prevent a supply emergency including –
 - (a) particulars to demonstrate that the duty holder has established adequate arrangements to monitor gas flow within the network in order to identify a forthcoming supply emergency;
 - (b) in cases where it is not possible to obtain sufficient gas, particulars of the procedures and arrangements that the duty holder has established to direct persons conveying gas to secure a reduction in consumption and to verify that such directions have been followed;
 - (c) particulars of the procedures that the duty holder has established to monitor the situation throughout a supply emergency, and details of the procedures established to restore safely the gas supply to consumers, once the emergency is over;
 - (d) particulars to demonstrate that the duty holder has established adequate arrangements to decide when and for how long gas not conforming with the requirements of regulation 8(1) should be conveyed in the network pursuant to regulation 8(2);
 - (e) particulars to demonstrate that the duty holder has established adequate arrangements for rehearsing and testing the actions to be taken in the case of a supply emergency;
 - (f) a general description of the plant and premises the duty holder intends to use in connection with the arrangements and procedures described in his safety case pursuant to this paragraph.
- (4) The same particulars as are referred to in paragraphs 4 to 11 of Schedule 1 as if any reference in paragraphs 4 and 6 thereof to the operation intended to be undertaken were a reference to the network emergency co-ordinator's functions under the arrangements and procedures described in his safety case.

SCHEDULE 3

[Regulation 8]

CONTENT AND OTHER CHARACTERISTICS OF GAS**PART 1****REQUIREMENTS UNDER NORMAL CONDITIONS****1**

The content and characteristics of the gas shall be in accordance with the values specified in the following table.

Content or characteristic	Value
hydrogen sulphide content	≤ 5 mg/m ³ ;
total sulphur content (including H ₂ S)	≤ 50 mg/m ³ ;
hydrogen content	$\leq 0.1\%$ (molar);
oxygen content	less than or equal to 0.2% (molar);
impurities	shall not contain solid or liquid material which may interfere with the integrity or operation of pipes or any gas appliance (within the meaning of regulation 2(1) of the 1998 Regulations) which a consumer could reasonably be expected to operate;
hydrocarbon dewpoint and water dewpoint	shall be at such levels that they do not interfere with the integrity or operation of pipes or any gas appliance (within the meaning of regulation 2(1) of the 1998 Regulations) which a consumer could reasonably be expected to operate;
WN	(i) less than or equal to 51.41 MJ/m cubed, and (ii) greater than or equal to 47.20 MJ/m cubed;
ICF	less than or equal to 0.48
SI	less than or equal to 0.60

2

The gas shall have been treated with a suitable stenching agent to ensure that it has a distinctive and characteristic odour which shall remain distinctive and characteristic when the gas is mixed with gas which has not been so treated, except that this paragraph shall not apply where the gas is at a pressure of above 7 barg.

3

The gas shall be at a suitable pressure to ensure the safe operation of any gas appliance (within the meaning of regulation 2(1) of the 1998 Regulations) which a consumer could reasonably be expected to operate.

4

- (1) Expressions and the abbreviations used in this Part shall have the meanings assigned to them in Part III of this Schedule.
- (2) ICF and SI shall be calculated in accordance with Part III of this Schedule.

PART 2

REQUIREMENTS FOR GAS CONVEYED TO PREVENT A SUPPLY EMERGENCY

1

- (1) The requirements of the gas referred to in regulation 8(2) and (4) are —
 - (a) WN —
 - (i) is less than or equal to 52.85 MJ/m cubed, and
 - (ii) is greater than or equal to 46.50 MJ/m cubed; and
 - (b) ICF is less than or equal to 1.49,

and in all other respects the gas shall conform to the requirements specified in Part I of this Schedule, as if those requirements were repeated herein.

2

- (1) Expressions and abbreviations used in this Part shall have the meanings assigned to them in Part III of this Schedule.
- (2) ICF and SI shall be calculated in accordance with Part III of this Schedule.

PART 3

INTERPRETATION

1

In this Schedule —

“bar” means bars (absolute);

“barg” means bars (gauge);

“C” means degrees Celsius;

“C3H8” means the percentage by volume of propane in the equivalent mixture;

“equivalent mixture” means a mixture of methane, propane and nitrogen having the same characteristics as the gas being conveyed and calculated as follows —

- (i) the hydrocarbons in the gas being conveyed, other than methane and propane, are expressed as an equivalent amount of methane and propane which has the same ideal volume and the same average number of carbon atoms per molecule as the said hydrocarbons, and
- (ii) the equivalents derived from (i) above, together with an equivalent for all of the inert gases in the gas being conveyed, expressed as nitrogen, are normalised to 100%, such that the equivalent mixture of methane, propane and nitrogen has a Wobbe Number equal to that of the gas being conveyed;

“ICF” means the Incomplete Combustion Factor;

“mg/m cubed” means milligrams per cubic metre at 15C and 1.01325 bar;

“MJ/m cubed” means megajoules per cubic metre where the calorific value of a dry gas is determined on the basis that the water produced by combustion is assumed to be condensed;

“N2” means the percentage by volume of nitrogen in the equivalent mixture;

“PN” means the sum of the percentages by volume of propane and nitrogen in the equivalent mixture;

“relative density” means the ratio of the mass of a volume of the gas when containing no water vapour to the mass (expressed in the same units) of the same volume of air containing no water vapour under the same conditions of temperature and pressure;

“SI” means the Soot Index;

“WN” means the Wobbe Number;

trigonometric functions are to be evaluated in radians.

2

In this Schedule, ICF, SI and WN shall be calculated in accordance with the following formulae —

$$\text{ICF} = (\text{WN} - 50.73 + 0.03\text{PN}) / 1.56$$

$$\text{SI} = 0.896 \tan \text{ (to the power of } -1) (0.0255\text{C}_3\text{H}_8 - 0.0233\text{N}_2 + 0.617)$$

$$\text{WN} = \text{calorific value} / \text{square root of relative density}$$