Definitions

“major accident” means—
(a) an event involving a fire, explosion, loss of well control or the release of a dangerous substance causing, or with a significant potential to cause, death or serious personal injury to persons on the installation or engaged in an activity on or in connection with it;
(b) an event involving major damage to the structure of the installation or plant affixed to it or any loss in the stability of the installation causing, or with a significant potential to cause, death or serious personal injury to persons on the installation or engaged in an activity on or in connection with it;
(c) the failure of life support systems for diving operations in connection with the installation, the detachment of a diving bell used for such operations or the trapping of a diver in a diving bell or other subsea chamber used for such operations;
(d) any other event arising from a work activity involving death or serious personal injury to five or more persons on the installation or engaged in an activity on or in connection with it; or
(e) any major environmental incident resulting from any event referred to in paragraph (a), (b) or (d),
and for the purposes of determining whether an event constitutes a major accident under paragraph (a), (b) or (e), an installation that is normally unattended is to be treated as if it were attended;

Wells Guidance
Loss of well control means complete loss of well control, such that the well continues to flow in an uncontrolled manner with release of well fluids to atmosphere, either directly or indirectly, at flow rates with the potential to cause death or serious personal injury.

“well” means—
(a) a well made by drilling; and
(b) a borehole drilled with a view to the extraction of petroleum through it or another well, and includes any device on it for containing the pressure in it;

Guidance
This definition applies to all wells in the external waters of the UK Continental Shelf, whether they are connected to a fixed installation, mobile installation, vessel or stand-alone well on the seabed.

Sub-paragraph (b) of the definition includes injection and monitoring wells. The definition does not cover boreholes that are drilled solely for the purpose of exploring for minerals, which are then to be extracted by another method, e.g. searching for aggregates on the seabed which are then exploited by dredging.

The well is defined in terms of its pressure containment boundary. Any equipment that is vital to controlling the pressure within the well is therefore covered. This would include down-hole pressure-containing equipment and the pressure-containing equipment on top of the well such as blowout preventers or Christmas trees, but excludes well control equipment
downstream that can be isolated from the well by valves. Examples of where the well ends are:
(a) above the top blowout preventer (BOP) in the BOP stack and outside the choke and kill valves;
(b) downstream of the swab and production wing valves of a Christmas tree;
(c) at the top of the stuffing box of a wireline BOP.

“well operation” means—
(a) the drilling of a well, including the recommencement of drilling after a well has been completed, suspended or abandoned by plugging at the seabed; and
(b) any operation in relation to a well which may result in an accidental release of fluids from that well which could give rise to the risk of a major accident; and

Guidance
This definition is needed primarily for regulation 21, which requires the notification of well operations. It also relates to the particulars of well operations required by Schedule 9. Such operations include all activities carried out on a well throughout its life cycle, such as drilling, completion, workover and well intervention. Operations with a low risk of accidental release of well fluids are excluded.

“well operator”, in relation to a well or a proposed well, has the meaning given in regulation 2(1) of the Offshore Petroleum Licensing (Offshore Safety Directive) Regulations 2015.

Guidance
This regulation defines a well-operator as the person appointed by the licensee to organise and supervise operations associated with the well. This is the person with sufficient knowledge of the reservoir and well structure to achieve the safe design, construction, maintenance, operation and eventual abandonment of the well. The licensee is usually a consortium of oil companies, granted a licence by the Department of Energy and Climate Change (DECC), and they usually appoint from amongst themselves the well-operator to operate the licence and exploit the field. They may also choose to appoint an outside contractor. In either case, the well-operator will have all control of the organisation and supervision of well operations. A contractor would have to be provided with all the information necessary to discharge the duty of well-operator.

The well-operator will often be the same person as the operator of the Petroleum Licence. In many cases the well operator will also be the operator of a production installation to which the well is connected.
Regulation 9: Establishment of Verification schemes

9.—(1) The duty holder must establish a scheme (a “verification scheme”) for ensuring, by the means described in paragraph (2), that the safety and environmental-critical elements and the specified plant—
(a) are or, where they remain to be provided, will be suitable; and
(b) where they have been provided, remain in good repair and condition.

(2) The means are—
(a) examination, including testing where appropriate, of the safety and environmental-critical elements and the specified plant by a verifier;
(b) examination of any design, specification, certificate, CE marking or other document, marking or standard relating to those elements or that plant by a verifier;
(c) examination by a verifier of work in progress;
(d) the creation of reports by a verifier on—
(i) the examination and testing carried out;
(ii) the findings; and
(iii) the remedial action recommended;
(e) the taking of appropriate action by the duty holder following a report;
(f) the making of a note of action taken by the duty holder following a report;
(g) the reporting by a verifier to the duty holder of any instances of non-compliance of the duty holder with the standards of the scheme;
(h) the taking of other such steps as may be provided for pursuant to regulation 10 and Part 1 of Schedule 4; and
(i) the taking of any steps incidental to the means described in sub-paragraphs (a) to (g).

(3) The duty holder must ensure that—
(a) the verification scheme is drawn up by or in consultation with a verifier and recorded in writing; and
(b) a note is made of any reservation expressed by the verifier as to the content of the scheme in the course of drawing it up.

(4) The duty holder must—
(a) produce a written record of the safety and environmental-critical elements and the specified plant;
(b) invite comment on the record by a verifier; and
(c) make a note of any reservation expressed by a verifier as to the contents of the record.

(5) The duties in paragraphs (1), (3) and (4) must be completed—
(a) in the case of a production installation, before completion of its design; and
(b) in the case of a non-production installation, before it is moved into external waters with a view to its being operated there.
**Guidance**

Regulations 9 and 10 require a duty holder to establish, put into effect and maintain a verification scheme.

Determination of the scope of the verification scheme, including the nature and frequency of activities within the scheme is wholly the responsibility of the duty holder. The scheme can be drawn up by the duty holder alone or the verifier can be asked to assist. The agreed scope should then be incorporated into the content of the scheme. The verifier should be given the opportunity to comment on the content of the scheme and a record made of any reservations expressed.

Production and non-production installations are required to establish their schemes at different stages. For a new production installation, a verification scheme must be established and put in hand before the completion of design work. A summary of the scheme must be included in the design notification (Schedule 5). The scheme applies to the installation throughout its life until it is dismantled.

For a non-production installation, the verification requirements take effect when it enters UK waters. However, duty holders will need to be able to demonstrate the adequacy of verification schemes in all respects, including matters relating to design, construction and the installation's history before the installation enters UK waters. Class and flag state surveys may support but do not in themselves fulfil the terms of a verification scheme. The requirement for the verification scheme ends when the installation leaves UK waters, though the scheme would restart if and when it returns.

Any installation intended for use in UK waters should be designed and constructed with these legal requirements in mind. Duty holders are strongly recommended to obtain suitable records of the installation's design and construction details with the installation. Duty holders acquiring existing or converted installations will find it helpful to seek similar records of their operating life.

The essential preliminary to developing an effective verification scheme is the appropriate identification of the safety and environmental critical elements (SECEs) for the installation. SECEs are defined in regulation 2. Work done to identify hazards in preparing the safety case will assist this process (the safety case will describe the arrangements to ensure the suitability of the SECEs - see Schedules 3 and 4). As well as the SECEs, the specified plant (as defined in regulation 2 to comply with PFEER) must be identified for this purpose.

The responsibility for the list of SECEs rests with the duty holder. A detailed assessment by the verifier of the methodology used to identify the SECEs is not required. However the verifier is invited to comment on the list of SECE’s using their professional judgement, expertise and experience to provide independent comment that the SECE’s identified are suitable. Wells are safety critical, but are covered by the well examination scheme in Regulation 21.
There should be means of demonstrating SECE suitability, state of repair and condition based on their function, reliability and availability. One method of making this demonstration may be through the use of performance standards. However, dutyholders may choose another approach to demonstrate this.

The ability of the duty holder to ensure the SECEs meet their performance standards provides some assurance that they are suitable and remain in good repair. By failing to meet either the performance or reliability aspects of a standard then the suitability, good condition and repair of SECEs may be harder to demonstrate.

The verifier has a number of means at their disposal when undertaking activities within the agreed scope of the verification scheme. Such means include, amongst other things, the examination of documentation / certification, physical testing of equipment, witnessing of testing activities or review of associated maintenance records. In some circumstances, it may also be appropriate for the verifier to examine work during various stages of completion including fabrication, construction and repair. On occasion, verifiers may need to undertake incidental activities to fulfil the agreed scope of the scheme, these are captured within Regulation 9(2)(i). It is anticipated that cumulatively, these means will enable the full execution of the verification scheme.

The verifier should produce a report clearly indicating the nature of the examination / test completed, any findings and any action recommended. It is not sufficient to simply state pass or fail without providing adequate detail of the verification activity undertaken.

The duty holder should establish adequate arrangements to ensure that verification reports reach the appropriate personnel. Any concerns and comments raised by the verifier should be considered by the duty holder when determining action required. The term "findings" relates to the broad spectrum of comments made by the verifier and is not restricted to higher level concerns only. Consideration of all comments raised provides a holistic view of the condition of SECEs and associated plant. This information should allow the duty holder to better determine any action to be taken.

A record of such findings and actions should be retained by the duty holder at the address notified to the competent authority until the expiration of six months after the scheme, or a modification of the scheme, has ceased to be current.

On occasion the verifier may identify that the dutyholder is not fully compliant with the terms of the scheme. This should be brought to the attention of the appropriate level of management within the dutyholders organisation who have the authority to ensure the matter is resolved and that compliance with the scheme is re-established.

The scheme itself should fully meet the requirements of Schedule 4, Part 1.

The list of SECEs can also be used as a starting point for arrangements to manage contractors and sub-contractors. In particular, consideration should be given to equipment used by Contractors which may not be captured by the terms of the verification or well
examination scheme eg, temporary equipment or mobile equipment associated with well operations.
Regulation 10: Other provisions as to verification schemes

10.—(1) A verification scheme must provide for the matters contained in Part 1 of Schedule 4.

(2) The duty holder must—
(a) ensure that where tasks under a verification scheme are allocated by the verifier to personnel of the verifier they are appropriately allocated to personnel qualified to undertake them;
(b) make suitable arrangements for the communication of information between the duty holder and the verifier; and
(c) give the verifier suitable authority to carry out the functions under the verification scheme effectively.

(3) The duty holder must ensure that—
(a) the verification scheme is reviewed as often as may be appropriate and, where necessary, revised or replaced by or in consultation with a verifier; and
(b) a note is made of any reservation expressed by the verifier in the course of drawing up the verification scheme.

(4) Where there is a material change to a design notification, a relocation notification, the safety case or a notification of combined operations the duty holder must refer the material change to the verifier for further comment in accordance with the verification scheme.

(5) If the competent authority requests, the duty holder must communicate the outcome of the referral of the material change to the competent authority.

(6) The duty holder must ensure that the verification scheme is put into effect from the time it is established and that effect continues to be given to the scheme, or any revision or replacement of the scheme, while the installation remains in existence.

Guidance
The duty holder should assure itself that those undertaking verification activities are qualified to do so. This will include the technical expertise, qualifications and sufficient experience to undertake specific roles.

The duty holder may consider a range of options for determining these qualities. This may be achieved by ensuring the verifier has a system to demonstrate that those undertaking specific verification activities are qualified to do so. An alternative approach may be to select a verifier with relevant accreditation. Consideration could also be given to industry guidance on the topic eg Step Change verification guidance.
The duty holder should ensure adequate arrangements are in place to record verifier findings and any subsequent action taken to resolve the matters. This record will include a summary of any relevant discussions and matters considered by the duty holder. This record will cross reference associated risk assessments which support the decisions taken. Consideration should also be given to “lessons learned” and how to capture information which may prevent re-occurrence of verifier findings. The status of the finding at the conclusion of any action taken should be both clear and recorded by the duty holder. In the course of scheme execution, the verifier should have access to such information (subject to paragraph **) to enable them to form an opinion on the suitability of the scheme throughout its use.

Adequate arrangements should be put in place to enable effective communication between the duty holder and the verifier. This includes arrangements to ensure that relevant personnel receive appropriate information. Consideration should be given to both onshore and offshore arrangements which, where necessary, enable immediate action to be taken. This should include ensuring that any verbal communication is directed to the most appropriate person and that any significant points are recorded until such time as a written report is produced.

The duty holder must ensure the verifier is given sufficient authority to carry out their role. This includes being able to:

- Gain access to relevant personnel to undertake a task;
- Undertake the full range of their duties including examinations and tests; and
- Obtain the necessary support to complete their work. This support may include access to relevant records through to sufficient access to the offshore installation.

A verification scheme will develop and should be subject to continual monitoring and review throughout the installation's life cycle. The principles for review of the scheme should be given within the scheme.

The verification scheme should be reviewed as often as may be appropriate. These could include the requirement for an annual review or a more fundamental revision, in line with safety case reviews and revisions.

The following examples should be incorporated into an annual review process:

- any development which could alter the list of SECEs;
- anything which affects the verification arrangements appropriate to them; and
- matters which change the nature of frequency of verification activities

Information arising as a result of the annual review process, or from other sources may indicate a fundamental revision of the verification scheme is required.
Such examples are:

• safety and environmental critical elements that are about to undergo major repair;
• SECEs modified or replaced or introduced (or removed) even for short periods of time as with safety-critical temporary or mobile equipment;
• an addition to the scheme to ensure that the suitability of the element introduced, modified or repaired will be verified before use or return to operation; and
• Changes to the operating envelope.

Revision of the scheme may also be required when the operation of the installation or plant changes in a manner that requires different duties from the SECEs. For example, the conversion of an installation from a non-production one to a production one will require changes to performance standards.

Risk assessments undertaken as a result of such changes may indicate that performance standards require revision, including standards associated with design. Where a material change situation is identified then the verifier should be invited to comment on the content of the change. The verifier should also consider if aspects of the material change impact on the suitability of the scheme and feedback to the duty holder accordingly. Any comments must be captured by the duty holder and where requested the duty holder must forward any such comments to the competent authority.

The duty holder should ensure that they continue to give effect to the verification scheme, including the matters specifically referenced in Schedule 4 (part 1).
Regulation 11  Establishment of well examination scheme
11.—(1) The well operator must establish a scheme (a "well examination scheme") for ensuring, by the means described in paragraph (2), that the well is so designed and constructed, and is maintained in such repair and condition, that—
(a) so far as is reasonably practicable, there can be no unplanned escape of fluids from the well; and
(b) risks to the health and safety of persons from it or anything in it, or in strata to which it is connected, are as low as is reasonably practicable.

(2) The means are—
(a) examination, by a well examiner of—
(i) any part of a well, or a similar well;
(ii) information, including information on the design and construction of the well and the sub-surface environment, including the geological strata and formations, the fluids within them and any hazards which the strata and formations may contain;
(iii) work in progress;
(b) the creation of reports by a well examiner on—
(i) the examination carried out;
(ii) the findings;
(iii) any remedial action recommended;
(c) the taking of appropriate action by the well operator following a report;
(d) the making of a note of action taken by the well operator following a report;
(e) the reporting by a well examiner to the well operator of any instances of non-compliance of the well operator with the standards of the scheme;
(f) the taking of other such steps as may be provided for pursuant to regulation 12 and Part 2 of Schedule 4; and
(g) the taking of any steps incidental to the means described in sub-paragraphs (a) to (e) of this paragraph.

(3) The well operator must record the well examination scheme in writing.

(4) The duties in paragraphs (1) and (3) must be completed before the design of a well is adopted.

Guidance
The examination required by this regulation is intended to assure the well-operator that the well is designed and constructed properly, and is maintained adequately. The purpose is to provide a scheme of quality control and quality assurance that the well complies with Regulation 13 “General duty” of DCR. It is essential for the examination to demonstrate that the pressure boundary of the well is controlled throughout the well’s life cycle and that the pressure containment equipment that forms part of the well is suitable for this purpose. The responsibility for the effectiveness of the well examination scheme lies with the well operator. When a well is connected to a fixed or a mobile installation, there may be an overlap between the well examination scheme and the verification scheme for the installation as required by regulation 9.
Where wells form part of such verification arrangements, the work carried out by the well-operator for the well examination scheme may be cited by the installation duty holder as part of those verification arrangements. Similarly, where part of a well (e.g. a blowout preventer) is covered by an installation’s verification scheme, the well-operator may cite the arrangements as part of the well examination scheme. The competent authority does not expect this work to be repeated or duplicated. The well examination scheme does not cover equipment that falls outside the pressure boundary of the well. Where such equipment is deemed to be safety-critical, it would need to be included in the installation verification scheme. A typical example of such equipment is mobile well-testing process equipment. Where a well is not attached to an installation, a separate well examination scheme will be required.

It is not anticipated that examination schemes will necessarily rely on physical examination of wells. Schemes can make use of documentary evidence of well safety, providing the documents’ veracity can be relied on.

The examination process should cover review of the assessment of anticipated subsurface conditions as required by Regulation 14 of DCR “Assessment of conditions below ground”.

The examination process is ongoing and must cover the entire life cycle of the well from design, through drilling and construction, the production phase and any well intervention activities in the well, including final decommissioning.

Reports from the well examination are required to be submitted with all notifications of drilling and other well operations. It is not anticipated that the reports will be exhaustive. They should summarise what has been examined in respect of the planned operations, the findings and recommendations from the examination and list any deviations from the standards described in the scheme.

The well examination scheme must be described in writing with sufficient information and instructions to all persons involved for the scheme to function as designed. Guidance for well operators on good practice on well examination is published by Oil & Gas UK.

The design of a well must be examined and a report from the examination included with the notification to drill the well. The written well examination scheme must be in place before examination of the design of the well commences and the well design is subsequently adopted.
Regulation 12: Other provisions as to well examination schemes

12.—(1) A well examination scheme must provide for the matters contained in Part 2 of Schedule 4.

(2) The well operator must—
(a) ensure that, where tasks under a well examination scheme are allocated by the well examiner to personnel of the well examiner they are appropriately allocated to personnel qualified to undertake them;
(b) make suitable arrangements for the communication of information between the well operator and the well examiner; and
(c) give the well examiner suitable authority to carry out the functions under the well examination scheme effectively.

(3) The well operator must ensure that the well examination scheme is reviewed and revised as often as may be appropriate.

(4) The well operator must ensure that the well examination scheme is put into effect from the time it is established and that effect continues to be given to the scheme, or any revision of the scheme, until the well is abandoned.

Guidance
The well examination scheme must, as a minimum, include the requirements listed in Part 2 of Schedule 4 of these regulations, namely:

- The principles for selecting a well examiner;
- The principles for keeping the well examination scheme under review and the arrangements for the review of the scheme;
- Arrangements for communicating the necessary information to the well examiner;
- The nature and frequency of examination;
- The arrangements for recording and preserving the records of the examination, the findings, remedial action recommended and remedial action taken; and
- The arrangements within the well operator’s organisation for managing the scheme.

The well operator has responsibility for the effectiveness the well examination scheme, including ensuring that well examiners are technically qualified and competent to carry out the role they have been assigned in the scheme.

The well operator is responsible for ensuring that the well examiners are provided with the necessary information and authority to fulfil their role effectively.

In line with the well operator’s responsibility for the effectiveness of the well examination scheme, the well operator must keep the scheme under review. Developing an examination scheme will be a continuing process and should be subject to on-going monitoring and review. Any development which could affect the containment of the pressure boundary should be incorporated into the assessment process. The scheme should be subject to periodic review. Details of the examination scheme and sufficient records should be kept to
form an auditable trail showing what work has been done, its findings, any recommendations made and any work carried out as a result. The Regulations specify keeping records for a period of six months after the relevant scheme ceases to be current (for example, after the well has been abandoned). Earlier records pertinent to a new scheme should be retained as long as they are relevant.

In a change from the 2005 regulations, the well examiner for the well must be consulted about all material changes to previously notified particulars. The report from the well examiner is also required to be submitted to the competent authority when notifying of a material change to a previous notification. The well examiner’s report need not be exhaustive, but must address any implications for safety or the environment arising from the material change.

Other well examiner reports (e.g. not attached to well notifications or material changes to notifications), must be made available to the competent authority on request. HM Inspectors of Health and Safety appointed under section 19 of the Health & Safety at Work etc. Act 1974 already have the powers under section 20 of the Act to require the provision of this information. This regulation similarly empowers others within the competent authority.

The well operator has responsibility for the application and effectiveness of the well examination scheme to the well, throughout the full life cycle until it is finally and permanently plugged and abandoned.
Regulation 13 : Description of verification scheme and well examination scheme

(1) For the purposes of these regulations a description of the verification scheme complies with this paragraph if it includes—
(a) a description of the criteria for selection of the verifier to carry out functions under the scheme;
(b) a description of the means of verifying that the safety and environmental-critical elements and any specified plant remain in good repair and condition; and
(c) details of the arrangements to carry out the functions under the scheme including—
   (i) the examination and testing of the safety and environmental-critical elements by the verifier;
   (ii) the verification of the design, standard, certification or other system of conformity of the safety and environmental-critical elements;
   (iii) examination of work in progress;
   (iv) the taking of remedial action by the dutyholder
   (v) the reporting of any instances of non-compliance of the duty holder with the standards of the scheme; and
   (vi) the review of the scheme throughout the lifecycle of the installation.

(2) For the purpose of regulation 8(6)(b), a description of the well examination scheme complies with this paragraph if it includes—
(a) a description of the criteria for selection of the well examiner to carry out functions under the scheme;
(b) a description of the means of verifying that the well is designed and constructed, and is maintained in such repair and condition, that—
   (i) so far as is reasonably practicable, there can be no unplanned escape of fluids from the well; and
   (ii) risks to the health and safety of persons from it or anything in it, or in strata to which it is connected, are as low as is reasonably practicable; and
(c) details of the arrangements to carry out the functions under the scheme including—
   (i) the examination of the well, or a similar well, by the well examiner;
   (ii) examination of information required under regulation 11(2)(a)(ii);
   (iii) examination of work in progress;
   (iv) the taking of remedial action by the Well Operator.
   (v) the reporting of any instances of non-compliance of the well operator with the standards of the scheme; and

Guidance
Regulation 8 requires the duty holder and well operator to include a description of the verification or well examination scheme in their SEMS. A description of the verification scheme will also be required in the safety case (see Schedules 6 and 7), and a well operator must include an adequate description of their SEMS in the well notification, if not already submitted. This description should summarise the arrangements which duty holders are required to put in place to ensure compliance with the Regulations.
The purpose of the description is to demonstrate that the duty holder has understood the requirements of the regulations and implemented adequate arrangements. The description will be assessed as part of the safety case submission and considered as part of the notification submission. For this reason the description should clearly address the specific parts of the regulations and associated schedules.

Refer to Schedule 4 Part 2 for those matters that must be covered in the description of a well examination scheme. More detailed guidance can be found in Guidelines for well-operators on well examination published by Oil & Gas UK.
Regulation 21: Notification of well operations

(1) The well operator must ensure that no well operation is commenced from a production installation in external waters unless—

(a) in the case of a well operation that does not involve drilling, but involves—
   (i) insertion of a hollow pipe in a well; or
   (ii) altering the construction of a well,
   the well operator has sent a notification containing the particulars specified in Schedule 9 to the competent authority at least ten days (or such shorter period as the competent authority may specify) before commencing that operation; or
(b) in any other case, the well operator has sent a notification containing the particulars specified in Schedule 9 to the competent authority at least 21 days (or such shorter period as the competent authority may specify) before commencing that operation.

(2) The well operator must ensure that no well operation is commenced in external waters (other than a well operation falling within paragraph (1)) unless the well operator has sent a notification containing the particulars specified in Schedule 9 to the competent authority at least 21 days (or such shorter period as the competent authority may specify) before commencing that operation.

(3) The well operator must include with the notification sent to the competent authority a statement, made after considering reports by the well examiner under regulation 11(2)(b), that the risk management relating to well design and its barriers to loss of control are suitable for all anticipated conditions and circumstances.

Guidance

The duty to notify the competent authority falls on the well operator rather than the installation duty holder who prepared the safety case or the vessel owner. Hazards vary in significance from well to well, for example because of varying geological conditions, so the installation safety case is unlikely to be able to describe fully all foreseeable operating conditions and hazards. The notification required by regulation 17 complements the accepted safety case by providing the additional information needed to establish that the intended well work will take place in conditions for which the effectiveness of major hazard control has already been demonstrated in the safety case. 'Well operation' is defined in regulation 2(1).

Notification is also required for well operations carried out from a vessel that is not an installation. This is limited to operations that are notifiable, but do not penetrate the pressure envelope of the well (e.g. removal of the well-head from a fully and permanently plugged well). Any other operation may only be carried out from an installation. The notification will provide the information needed to demonstrate that the intended well work will take place in conditions that will ensure health and safety as required by the HSW Act. If these operations relate to a well connected to an installation, the notification will also complement the installation's safety case.
In summary, well notifications are required as follows:

(a) vessels - all well operations at least 21 days before operations commence;
(b) non-production installations - all well operations at least 21 days before operations commence;
(c) production installations – all operations involving drilling at least 21 days before operations commence;
(d) production installations – all operations not involving drilling but which alter the construction of the well or which involve insertion of hollow pipe in the well at least 10 days before operations commence.
(e) production installations – routine well interventions other than those above and which may be considered to have low risk of significant release of well fluids, carried out following standard procedures and where control measures are covered in the installation safety case, do not need to be notified.

This means that most stand-alone wire-line interventions on a production installation will not need to be notified. Details of major hazard controls should be included in the installation safety case. Where wire-line activity is required to alter the well construction, this is notifiable. A significant change to the well construction needs to take place to be regarded as 'altering' it. Inserting hollow pipe includes inserting coiled tubing.

The well operator, must include a statement within the well notification, once the well examiner has examined the well design and plan of work covered by the notification and reported the findings and recommendations, that the design of the well and the well control equipment and procedures to be employed are sufficient to prevent, so far as is reasonably practicable, any unplanned escape of fluids from the well.

(4) Where the well operator plans or prepares a material change to any of the particulars notified pursuant to paragraph (1) or (2), the well operator must consult the well examiner under the well examination scheme about the planned or prepared material change.

(5) Where there is a material change in any of the particulars notified pursuant to paragraph (1) or (2) prior to completion of the relevant well operation, the well operator must notify the competent authority of that change as soon as practicable.

(6) A notification of a material change under paragraph (5) must contain sufficient details fully to update the previously submitted notification and be accompanied by the report of the well examiner following the consultation under paragraph (4), addressing in particular the matters in paragraph 6(c) to (e) of Schedule 9.

Guidance

Examples of changes that would merit notification under paragraph (3) include:

(a) changes to the particulars of fluids, plant, equipment, well path, well design, procedures, or management arrangements that would affect the hazards as described according to Schedule 9;
unforeseen interruptions of the programme of works. If the interruption is anticipated to be for less than approximately 21 days the recommencement of operations should be notified at the time of notifying the change.

In a change from the 2005 regulations, the well examiner for the well must be consulted about all material changes to previously notified particulars, and a copy of the well examiners report must be attached to the material change. The competent authority must also be notified of all material changes as soon as practicable; the requirement to consult the well examiner must not prevent timely notification to the competent authority.

Many material changes arise from subsurface conditions found to be different from those expected and changes to the well design and construction or operational procedures are required as a result. The well operator has responsibility for ensuring that so far as is reasonably practicable there can be no unplanned escape of fluids from the well. The requirement to consult the well examiner and inform the competent authority must not prevent the timely implementation of proposed changes where they are necessary to prevent the unplanned escape of fluids (see Regulation 13 of DCR, as amended by Schedule 13.29).

(7) The well operator must not commence a well operation (of any description) where the competent authority expresses objections to the content of the notification sent in respect of the well operation or any change to that content notified to the competent authority pursuant to paragraph (5).

(8) Subject to paragraph (9), the well operator must include a copy of the corporate major accident prevention policy with a notification sent to the competent authority pursuant to paragraph (1) or (2).

(9) Paragraph (8) does not apply where the well operator has previously sent its corporate major accident prevention policy to the competent authority or where it is not required to have one.

Guidance
In a change from the 2005 regulations, notified operations may not commence if the competent authority expresses objections about the design of the well or programme of work described in the notification. Normally the competent authority will express any objection within the statutory notification period of 21 or 10 days.

The well operator is required to submit a copy of the well operator’s current corporate major accident policy with a notification if it has not already been submitted with a safety case or with a previous notification.
Corporate policies should cover the measures to ensure that well control systems downstream of the well-head which may be exposed to well pressure (including pipe-work, choke manifold, kill manifold and degasser) maintain their fitness for purpose and pressure integrity.

Corporate policies should cover the provision of recording of drilling data and well integrity data in either analogue graphic form or in digital electronic form. Arrangements should ensure that key data is collected and recorded and that measures are in place to ensure the integrity of the recorded data.

The well operator should also include a description of their SEMS, unless this has already been submitted, which will should include a description of the well operator’s well examination scheme as specified in Regulation 13 of these regulations.
Regulation 30: Internal emergency response

30.—(1) The duty holder must perform the internal emergency response duties—
(a) consistently with the external emergency response plan; and
(b) taking into account the risk assessment undertaken during preparation of the current safety case for the installation.

(2) Where the duty holder has adopted other measures, the duty holder must perform the internal emergency response duties so as to secure a good prospect of personal safety and survival, taking into account the adoption of those other measures.

(3) In paragraph (2) “other measures” means measures relating to protection and rescue of personnel from a stricken installation, apart from any measures adopted in performance of the internal emergency response duties.

(4) Where an installation is to engage in a combined operation the duty holder for the installation must make arrangements, in advance of the installation’s engagement in the combined operation, for coordinating escape, evacuation and rescue between the installations concerned, to secure a good prospect of survival for persons on the installations during a major accident.

(5) Where a non-production installation is to engage in a combined operation and the description of the internal emergency response arrangements is revised, the owner must send a revised description of the internal emergency response arrangements to the competent authority.

(6) Where a mobile non-production installation is to be used for carrying out a well operation the owner must perform the internal emergency response duties taking into account the risk assessment undertaken during the preparation of the notification of well operations.

(7) Where a mobile non-production installation is to be used for carrying out a well operation and the description of the internal emergency response arrangements is revised as a result of the particular nature or location of a well, the owner must send a revised description of the internal emergency response arrangements to the competent authority.

(8) Paragraphs (5) and (7) do not apply where a revised description of the internal emergency response arrangements has been sent to the competent authority as a revision which makes a material change to the current safety case that is required to be sent to the competent authority under regulation 24(2) in connection with the same operation.

(9) Subject to paragraph (10), the duty holder must send the revised description of the internal emergency response arrangements to the Maritime and Coastguard Agency( ) as soon as is practicable.
(10) Where—
(a) the description of the internal emergency response arrangements is revised because there is a material change to any of the particulars contained in a design notification, relocation notification, notification of well operations or notification of combined operations; but
(b) that revision makes any change to the current safety case which must be accepted by the competent authority under regulation 19(7)(c), 20(1)(c), 24(2)(b) or 25(3)(b), the duty holder must not send the revised description of those arrangements to the Maritime and Coastguard Agency before the competent authority has accepted the relevant revisions.

(11) In any case falling within paragraph (10), the duty holder must send the revised description of the internal emergency response arrangements as soon as practicable after the competent authority has accepted the revisions.

(12) The duty holder must maintain expertise relevant to the internal emergency response duties in order for that expertise to be available at all times and to be made available as necessary to the Maritime and Coastguard Agency.

(13) In this regulation and regulation 2(10)—
“the internal emergency response duties” means the duties in the following regulations of the PFEER Regulations( )—
(a) 5 (assessment);
(b) 6 (preparation for emergencies);
(c) 7 (equipment for helicopter emergencies);
(d) 8(1), (2), and (3) (emergency response plan);
(e) 9(1) (prevention of fire and explosion);
(f) 10 (detection of incidents);
(g) 11 (communication);
(h) 12 (control of emergencies);
(i) 13 (mitigation of fire and explosion);
(j) 14 (muster areas etc.);
(k) 15 (arrangements for evacuation);
(l) 16 (means of escape);
(m) 17 (arrangements for recovery and rescue);
(n) 22B (initiation and direction of emergency response, and liaison with external response authorities); and
(o) 22C (arrangements for early warning of major accidents).

Guidance
The internal emergency response arrangements consists of a duty holders emergency response duties in accordance with PFEER and their response arrangements to an oil pollution incident required under The Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations 1998 (as amended) (the OPRC Regulations).
The duty holder should consider the significant findings of any relevant risk assessments completed with regard to their operations. In particular the findings of their PFEER Regulation 5 assessment is key to the development of suitable emergency response arrangements.

The PFEER assessment should have identified all reasonably foreseeable scenario’s with the potential for Fire, Explosion and / or those situations which may require evacuation, escape or rescue. These scenario’s should be used for developing both their internal and external emergency response plans.

Assessments should identify the principle Major Accident Hazard scenario’s associated with the installation including the chain of events / circumstances which may give rise to these hazards. The assessment should provide information on the reasonably foreseeable outcomes from each event which will be key to forming suitable internal emergency response arrangements.

Emergency Response arrangements should also identify any scenarios which may require input from, or liaison with, external parties to ensure a fully effective response. Liaison with the MCA, JCA, Police or similar may be required to facilitate relocation to other installations or onshore facilities. The dutyholder must ensure their emergency response arrangements identify these likely scenario’s and ensure a fully integrated response.

The dutyholder must ensure that both their internal and external emergency response plans work effectively together. They must ensure that no action required by the internal emergency response plan renders activities in the external emergency response plan ineffective.

Where duty holders are engaged in combined operations they must ensure that the internal emergency response arrangements of all involved parties are reviewed. From this review an agreed, co-ordinated plan should be developed for the duration of the works.

Where the combined Operation involves a Production and Non Production Installation it is anticipated that the Operator of the Production Installation shall take primacy with regard to emergency response and that the Operator of the NPI shall adhere to this agreement.

The findings of combined Operations reviews and the agreed co-ordinated approach should be documented in a bridging / interface document agreed by all parties. It is expected that all parties will adhere to any agreed arrangements for as long as they remain fit for purpose. The Operator of any NPI engaged in well operations should ensure its emergency response arrangements consider the findings of any risk assessment completed as part of the well notification development.

Where this necessitates an emergency response which differs from that described in the original safety case submission then these new arrangements should be documented and a description submitted to the Competent Authority with the well notification. This may take the form of an interface or bridging document. It is anticipated that such submissions will supplement or build upon the existing emergency response arrangements, not change them.
Where such a review identifies a change to the basis on which the original safety case was accepted then the dutyholder should consider whether this constitutes a material change and act accordingly.

Where material changes to the safety case have been submitted and accepted by the Competent Authority then the Operator should perform their emergency response in accordance with the accepted safety case and relevant accepted materials changes.

The provision of bridging documentation does not necessarily lead to a change to the description of the emergency response arrangements. Only if the risk changes then this would trigger a material change as referenced above.

Where these material changes pertain to emergency response then the Operator should send a revised description of the emergency response arrangements to MCA in relation to the external emergency response plan. It should be noted that if an updated OPEP resulting from a material change (e.g. of a safety case or notification) has already been sent to MCA under DECC legislation, then it does not need to be resent under this regulation (see Regulation 30(10). In such cases, if appropriate sending MCA an updated description of the emergency response duties will be sufficient.

Operators must identify the appropriate personnel and competencies necessary to implement their emergency response arrangements effectively. They should then ensure that they deliver all necessary information, instruction and training to emergency response team members and workforce. These competencies should be tested and demonstrated on a regular basis to ensure their suitability.

All duty holders are required to have an oil pollution emergency plan (OPEP) for their installation in accordance with the OPRC Regulations and associated guidance and provide a description in their safety case. The description of response arrangements in the safety case may describe that oil pollution tier 2/3 response arrangements will be undertaken and controlled by a production installation operator in the event of combined operations and/or the well operator for the tier 2/3 response. These other response arrangements would be detailed within relevant Temporary Operation OPEP’s or Bridging Documents.

Where well operations are to be undertaken by a mobile non-production installation which would require the response arrangements to be undertaken differently, the owner must amend the description of the oil pollution response arrangements in the safety case.

In conjunction with the description of emergency response arrangements in the safety case, duty holders must submit the relevant OPEP to the Competent Authority in accordance with the OPRC Guidance unless there already exists an approved OPEP.

The OPEP must detail the response arrangements for an oil pollution incident both from the installation (Tier 1) and the Tier 2 and Tier 3 arrangements which may be controlled from an onshore emergency response centre.
The duty holder or, where appropriate the well operator, must describe the arrangements for coordinating the internal response with the MCA National Contingency Plan and have arrangements for the establishment of an OCU in the event of a major oil pollution incident.
Schedule 9: Particulars to be included in a notification of well operations

1. The name and address of the well operator.

2. Where the well operation is to be carried out -
   (a) from an installation, the name of the installation and the name and address of the duty holder for that installation; or
   (b) by means of a vessel (not being an installation), the name of that vessel.

3. Particulars of the fluids to be used to control the pressure of the well.

   The particulars required include the generic fluid type and gravity density for drilling each hole section and for production testing, completion and work-over operations etc, as well as details of packer fluids.

4. Particulars of any plant, not described in the current safety case for the installation, which is to be used in connection with the well operation.

   This may include particulars of equipment that may influence the level of risk of a major accident such as blowout, fire or explosion. Examples of such equipment are well test packages, workover pressure control equipment, hydraulic fracturing equipment, coiled tubing and/or wireline equipment, cutting injection systems etc. In principle these particulars would include the rating of major items (pressure, temperature, fluids, flow rates etc, as appropriate), any safety features and, for complex setups, a simple diagram showing the configuration.

5. Particulars of the type of well, its number, and slot number, association with installations, and the name of any field development of which it may be part.

   The well type refers to the current and/or intended future function of the well. The well number should clearly identify the well with reference to the relevant safety case(s) and to the DECC well registration numbering system.

6. A description of the well operation and a programme of works which includes—
   (a) the date on which the well operation is expected to commence and finish;
   (b) the intended operational state of the well at the end of the well operation, including whether it is intended to be permanently or temporarily abandoned and whether production equipment is to be placed into the well for future use;
   (c) details of barriers against loss of well control (including the equipment, drilling fluids and cement);
   (d) directional control of the well path; and
   (e) limitations on safe operations in keeping with the risk management.

   The description should include the sequence of operations which can be reasonably foreseen, emphasising details of the safety-related steps, for example drilling pilot hole for shallow gas, casing/tubing pressure test details, formation integrity tests, cementing / cement tops, blow-out preventer (BOP) and barrier testing.
The description of the operational state at the end of the operations can be restricted to "completed - operating", 'completed – shut in', 'completed – operations suspended', 'operations suspended' or 'decommissioned' completed', 'suspended' or 'abandoned' (see also the guidance to DCR regulation 13).

Details of barriers should identify all barriers in annuli and in the well bore, temporary and permanent, throughout the operations covered by the notification. Details should include the type of barrier and how its pressure integrity is to be verified.

Details of the directional control of the well path should include the directional survey programme for each hole section, a description of, or reference to, the procedures for avoiding and minimising the consequences of unplanned well intersection. Confirmation is required, that risk of intersection has been addressed, identifying all wells at risk of intersection and the steps to be taken to reduce the risk.

Subsurface conditions which will limit continued safe operations should be clearly identified. These will include down-hole temperature, pore pressure, drilling fluid losses, kick tolerance or concentrations of hazardous substances, such as hydrogen sulphide. Proposed contingency plans should be identified.

7 A description of-
   (a) any activities on or in connection with an installation or a vessel (not being an installation) during the well operation described pursuant to paragraph 6 which may involve any hazards with the potential to cause a major accident; and
   (b) such hazards.

Unusual hazardous activities should be highlighted, for example production testing high-pressure wells with an un-weighted packer fluid, long perforating runs, high test flow rates, extending the scope of simultaneous operations. Hazardous activities and hazards may be described by referring to the information and the demonstrations in any relevant installation safety case.

8 In the case of a well which is to be drilled -
   (a) particulars, with suitable diagrams, of-
       (i) the location of the top of the well;
       (ii) the directional path of the well-bore;
       (iii) its terminal depth and location; and
       (iv) its position, and that of nearby wells, relative to each other;

Critical depths should be given as measured along the hole and vertically.
The diagram of the directional path should include a plot with vertical section and horizontal plan. It applies to non-vertical wells only.

The diagram showing the relative positions would be most effective in the form of a map showing the surface location and the entire lateral position of the well and of all other wells in the vicinity with their identification.
(b) particulars of the geological strata and formations, and of fluids within them, through which it will pass, and of any hazards with the potential to cause a major accident which they may contain;

This information would normally include a geological column from surface to total depth. This would show the measured and vertical depths of critical strata, estimated formation pressures of all permeable and porous formations, and estimated fracture pressures at intended casing points. The particulars of fluids should include prognoses of fluid types, fluid gradient, presence of gas caps, presence and concentration of toxic fluid components. The particulars should also identify the potential producing formation(s) and include a prognosis of the temperature in these zones and at total depth of the well.

The geological hazards specifically associated with the well should be highlighted, for example shallow gas potential, squeezing salts, major loss zones, overpressures and unusual geological uncertainty.

(c) the procedures for effectively monitoring the direction of the well-bore, and for minimising the likelihood and effects of intersecting nearby wells; and

These procedures may take the form of a description of the system for programming surveys and for monitoring these in relation to nearby wells, together with the associated action plan. Alternatively, a survey programme for each hole section and the separation factors for significant nearby wells may be included.

(d) a description of the design of the well, including the limits on its safe operation and use.

The description would normally include, for each hole section, the design hole size(s) and the size and specification of the casing string to be run with design setting depth, hanger depth (if applicable) and design kick tolerance. It should identify the formations in which the casing should be set if this is critical to the design. It should also include critical specification details if the pipe or coupling codes are not American Petroleum Institute (API) specified.

The description would also include the well-head design specifications, details of the casing cementing design, and principles of the design of temporary plugging or decommissioning barriers if carried out contiguous with the drilling activities.

For the design of the testing completion, the description should include the hanging-off arrangements, the string configuration, all safety devices incorporated, the perforating system and the packer fluid.

For a development well, there should be a description of the completion design.
The limits on safe operation and use are the pressure, flow rate, temperature and metallurgical limitations (arising from the chemical composition of well bore fluids) of the well design, of the flow testing or production completion equipment design and of the proposed well control equipment.

9 In the case of an existing well -
   (a) a diagram of the well;

This relates to the current casing diagram and completion/suspension diagram.

   (b) a summary of earlier operations in relation to it;

This summary should identify the dates and brief details of previous notifiable operations.

   (c) the purposes for which it has been used;

The current use of the well should be highlighted.

   (d) its current operational state;

This can be restricted to ‘completed’ – operating (ie on production, or injection), completed – shut in or plugged

   (e) its state of repair;

It is important to include details of any known or suspected safety-related failure or defect in the well, for example valve failures, leaks, wear, corrosion and unintended plugging or pressure communication

   (f) the physical conditions within it; and

This refers to the physical details of barriers and fluids in the well and the actual or estimated shut-in pressures and temperatures. Conditions to be highlighted are those which will prevent installing or employing well control equipment according to accepted standards, such as those described in industry guidelines or any relevant safety case. This should include details of hazardous substances, for example hydrogen sulphide.

   (g) its production capacity

Estimate of scale of potential blowout or production from the well.

10 Where a well operation is to be carried out by means of a non-production installation or a vessel (not being an installation) -
   (a) particulars of-
      (i) the meteorological and oceanographic conditions to which that installation or, as the case may be, vessel may foreseeable be subjected;
Any foreseeable conditions approaching the limiting conditions described in any a relevant installation safety case should be highlighted. These should include sea state, riser tensioning, riser vortex shedding and currents.

(ii) the depth of water; and

For reference purposes it is important to include the depth of the sea floor below the well reference level.

(iii) the properties of the sea-bed and subsoil at the location at which the well operation will be carried out; and

This should include the conclusions of site-specific shallow seismic surveys showing the potential for shallow gas at and in the vicinity of the well location. It may also include information relating to any seabed obstructions at and in the vicinity of the well location, for example pipelines, cables, wrecks and unexploded ordnance, and details of site survey(s) showing, for example, anchoring conditions and jack-up foundation integrity.

(b) a description of how the well operator and -
   (i) the owner of the installation; or
   (ii) the operator and owner of the vessel

involved in the well operation will coordinate their management systems so as to reduce the risks from a major accident to comply with the relevant statutory provisions.

11. The report made under regulation 11(2)(b) in relation to the well operation, addressing in particular the matters in paragraph 6(c) to (e), together with a description of the actions of the well operator in response to the report.

12. A risk assessment incorporating a description of—
   (a) the particular hazards associated with the well operation including any environmental, meteorological and seabed limitations on safe operations;
   (b) the subsurface hazards;
   (c) any surface or subsea operations which introduce simultaneous major hazard potential; and
   (d) suitable control measures.

13. Where a well is to be constructed, modified or maintained by means of a non-production installation, additional information as follows—
   (a) a description of any environmental, meteorological and seabed limitations on safe operations, and arrangements for identifying risks from seabed and marine hazards such as pipelines and the moorings of adjacent installations;
   (b) a description of environmental conditions that have been taken into account within the internal emergency response arrangements for the installation;
   (c) the description of the internal emergency response arrangements and a description of arrangements for responding in cases of major environmental incidents that are not described in the safety case; and
   (d) a description of how the management systems of the well operator and the owner are to be coordinated to ensure effective control of major hazards at all times.
14. Particulars of information obtained pursuant to the PFEER Regulations and the Management Regulations 1995, so far as—
(a) relevant to the prevention of a major accident, and
(b) not otherwise required to be provided pursuant to this Schedule.

15. In respect of a well operation to be conducted, particulars of information relevant to the relevant statutory provisions obtained pursuant to Directive 2011/92/EU of the European Parliament and of the Council on the assessment of the effects of certain public and private projects on the environment ( ).

16. An adequate description of the well operator's safety and environmental management system (unless such a description has already been submitted by the well operator under another provision of these Regulations).

The description requires information on the management structure indicating the roles and responsibilities of key personnel involved with the well operation, including the operator's representatives and representatives of subcontractors on board the installation or vessel. This entails identifying who has overall charge of the well operations and specifying the arrangements made for communication between responsible persons both on and offshore, during normal operations and in emergency conditions. The notification should refer to the safety related systems, codes and procedures which will be applied during operations, for example well control procedures, permit-to-work systems, barrier policies, well and completion design, and material or equipment selection.

A description of the well operator's safety and environmental management system should be included with the notification if it has not been submitted to the competent authority with a previous notification or with a safety case for which the well operator is the installation duty holder. The CMAPP and the SEMS are live documents. Therefore, although the notification may be completed any material change to these documents should be submitted to the Competent Authority (e.g. either directly as a separate material change submission or as part of the next well notification after the material change is completed).

The planned actions of the well operator should be noted against each finding or comment. Where recommendations of the well examiner have not been accepted by the well operator; the reason for non-acceptance should be listed

The notification should include a risk assessment. This is a slight change to the requirement of the 2005 safety case regulations, which required a description of the hazards specific to the well.

The risk assessment should identify the hazards specific to the well and with the potential to cause a major accident; it should summarise the arrangements to control the risk.

In addition to the hazards arising from the subsurface conditions it should cover those arising from the environmental, meteorological and seabed conditions at the well location and the conduct of the operation or the planned use of the well. Examples would include: the
hazards associated with temporary well test equipment, increased risk of collision due to the presence of a hydraulic fracturing vessel; increased gas inventory due to installation of gas lift; simultaneous conduct of operations on adjacent wells.

The well operator, if not also the duty holder for the installation, has a duty to cooperate with the duty holder to enable him to comply with relevant statutory requirements. This applies in particular to the requirements of PFEER to prevent and mitigate fire and explosion and the release of flammable or explosive substances, for example during well testing using mobile surface test equipment. The arrangements will normally be fully covered by other requirements of this schedule.