CLARIFICATION OF DECC GUIDANCE RELATING TO ENVIRONMENTAL ASPECTS OF DRILLING, WELL INTERVENTION AND WELL ABANDONMENT OPERATIONS

The attached documents collate the additional information communicated to oil and gas operators and/or Mobile Drilling Unit (MoDU) operators after the Deepwater Horizon accident. Guidance is provided in relation to four aspects, Environmental Statements and Direction Applications; Other Environmental Application Submissions; Oil Pollution Emergency Plans; and Environmental Reviews and Inspections. It is strongly recommended that operators should study all four documents to develop an overall picture of the environmental requirements.

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Guidance Relating to Environmental Statements and Direction Applications

This supplementary guidance should be read in conjunction with the Department of Energy and Climate Change (DECC) Guidance Notes relating to the Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999 (as amended), commonly referred to as the Environment Impact Assessment or EIA Regulations. Issues that have been identified as requiring particular attention following the Deepwater Horizon accident are summarised in the following sections. Operators are reminded that reliable, consistent and complete information is needed by DECC to develop an assessment of the potential risks associated with an activity, and that failure to provide the necessary information will cause delay and may lead to an Environmental Statement (ES) or application for a Direction being refused.

1. Period of Notice

Environmental Statements are subject to Public Notice, and there is no set timetable for approval, but DECC will endeavour to determine the submissions within three months of their receipt. In the case of proposals that are the subject of a number of representations, or proposals that require an Appropriate Assessment under the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended), or where it is necessary to request additional information from the applicant, it could take considerably longer. In the case of applications for Directions, operators must provide sufficient notice of the proposed operations, as it will not always be possible to determine all of the necessary approvals within the minimum recommended notice period (28 days). A longer period of notice may be required if there are implications under the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended), including a requirement for a Survey Consent for a Vertical Seismic Profile (VSP). A longer period of notice will also be required for some well operations undertaken using MoDUs, for example wells located to the west and north of the Shetland Isles, the Moray Firth or the Irish Sea, and all High Pressure and High Temperature (HP/HT) wells.

2. Commencement Date

Environmental Statements will normally consider the potential impacts during the likely period of the activity, or they may consider potential impacts at any time of the year if the timing of the proposed activity has still to be confirmed. There is no requirement to confirm the commencement date of the proposed activity. In contrast, applications for Directions must confirm the commencement date of the proposed activity, as this will reflected in any approval. Whilst it is appreciated that operators will wish to obtain early approval of their submissions, the provision of speculative and unrealistic commencement (or spud) dates, or dates that conflict with other activities being undertaken using the same vessel or MoDU, serves no useful purpose. It is acknowledged that there may be cases where batch drilling will justify the use of the same spud date for a number of wells, and this can be explained in the Justification section (Section C) of the relevant applications for Directions. In all cases, the commencement dates provided should be realistic, and
should be updated regularly to reflect any delays to allow DECC to effectively prioritise the workload and ensure that determinations are completed in advance of the operators’ requirements. Updates can be notified by e-mail (via emt@decc.gsi.gov.uk), but when the commencement date is confirmed it will be necessary to additionally update the application submitted via the UK Oil Portal. Operators should also notify DECC, using the same e-mail address, as soon as possible following commencement and completion of the activity, to enable DECC to effectively plan its inspection activity.

3. **Well Name and/or Number**

Environmental Statements usually refer to wells using the UKCS Block Number, or using the name of a particular prospect of field. This is acceptable. Applications for Directions made via the Portal must include a WONS well number. In the case of new wells, this number can be generated in the application for the Direction, and prior to completion and submission of the application for well consent. The WONS well number should then be used for all related environmental submissions, including those that are not mediated via the Portal. If the WONS well number is not used to provide a clear linkage between the application for a Direction and related environmental submissions, e.g. the Oil Pollution Emergency Plan (OPEP), operators will be required to submit an update or updates to correct or include the information in relevant submissions, which could delay the determination of one or more applications. If there is a relevant prospect or field name, it should also be referred to in the Justification section (Section C) of the application for a Direction. It is also acceptable to include reference to the operator’s well designation, but the key linkage must be provided via the WONS well number.

4. **Multiple Wells**

Environmental Statements may cover more than one well, but separate applications for Directions are required for individual wells. The OPEP, can also cover more than one well, but it is essential that all the relevant WONS well numbers are detailed in the submission. If, for example, an OPEP only identifies one well, but it is a three-well programme, it may be assumed that there is an outstanding OPEP submission for the other wells and DECC may with-hold determination of the application for a Direction for those wells (and/or the determination of other related environmental submissions). If the intention is to update the OPEP to cover additional wells, this should be referred to in the Justification section (Section C) of the application for a Direction to avoid a delay. (Consent to Locate applications for MoDU operations are unlikely to be delayed, as the navigational assessment will be based upon the duration of the location, and would be unaffected by the approval process for subsequent wells).

5. **Well Type**

Environmental Statements should confirm whether the subject well, or wells, are exploration, appraisal or development wells. Operators must also correctly identify the well type in the Justification and Well Information sections (Sections C and D1) of
the application for a Direction. If contradictory, or incomplete, information is provided, the application for a Direction may be refused or, at best, operators will be required to submit an update to correct or include the information which could delay the determination.

6. Hydrocarbon Type

Environmental Statements should indicate the anticipated hydrocarbon, i.e. whether it is oil, condensate or gas, or a combination of those hydrocarbons. Operators must also identify the hydrocarbon type in the Justification section (Sections C) of the application for a Direction, and do so consistently in all related environmental submissions. For appraisal and development wells, the information should also be aligned with the flow rate information included in the Development Information section (Section D2) of the application for a Direction (see below). If inconsistent or contradictory information is provided, one or more of the applications may be refused or, at best, operators will be required to submit an update or updates to correct or include the information in the relevant submissions which could delay the determination of one or more applications. Having identified the hydrocarbon type, it is also important to ensure that the text of the ES or the application for a Direction is consistent. It is also important to use consistent terminology in the application, as use of the term “oil spill” to cover condensate spills (or diesel fuel spills) has been misinterpreted by lay readers to indicate that there is the potential for a crude oil spill.

7. Hydrocarbon Flow Rates

The anticipated hydrocarbon flow rate, or rates for mixed production, should be included in Environmental Statements and in the Justification section (Sections C) of the application for a Direction, so that this can be related to the flow rate or rates used to develop the OPEP. If there are significant differences between the rates included in the discussion of the well characteristics and the discussion of the spill response, this should be explained. For appraisal and development wells, operators must also indicate the anticipated flow rate or rates, and any anticipated flare rate or rates, in the Development Information section (Section D2) of the application for a Direction. This information must be consistent with the hydrocarbon type information (see above), and an explanation should be provided in the Justification section (Section C) of the application for a Direction if there are significant differences between any of the data provided. If inconsistent or contradictory information is provided in an ES, operators will be required to provide an explanation, and this could be deemed to be material to our determination and therefore necessitate a further period of Public Notice. If inconsistent or contradictory information is provided in an application for a Direction, the application may be refused or, at best, operators will be required to submit an update to correct or include the information which could delay the determination.

7. Accidental Events

Environmental Statements must include a detailed discussion of accidental events that could give rise to a hydrocarbon release, broadly based upon the OPEP
requirements but including significant additional detail in relation to the mitigation measures in place to prevent a release, the likely fate of the release, the proposed response measures and the potential environmental impacts of a release. The discussion must include consideration of worst-case scenarios, including a well blow-out where all containment barriers have failed, and the total loss of the liquid hydrocarbon fuel inventory on the installation, MoDU or vessel undertaking the activity. The hydrocarbon type and potential release rate in the event of a blow-out should be relevant to the subject well, or an explanation provided if a different approach has been taken (for example, when drilling an exploration well, it is acceptable to use a hydrocarbon type and release rate relevant to a similar well that has already been drilled to the same strata in the same general area). The selected release should then be modelled to determine the likely fate of the release, including any potential beaching locations, and the modelling results should be used to develop the proposed response measures and to assess the potential environmental impacts of the release. The discussion should also draw upon the conclusions and recommendations detailed in the various reports relating to the Deepwater Horizon accident, and any relevant reports of other blow-out events, to confirm that appropriate measures have been taken into consideration during the development of the management plan for the proposed activity. It is recommended that the discussion of accidental events is included as a separate section in the ES, or as an annex to the ES, so that it can be retained as a separate document and updated as necessary to form part of the OPEP justification document (see Sections 4.3 and 13 of the DECC Guidance Notes to Operators of UK Offshore Oil and Gas Installations - the OPEP Guidance). Where a proposed activity has not been the subject of an ES, or the ES pre-dates the most recent EIA Guidance in relation to the consideration of accidental events, operators should mirror the ES requirements in a separate OPEP justification document. Irrespective of whether the document is developed from the ES or prepared as a separate document, it is necessary to ensure that the content of the justification document is aligned with the scope of the OPEP.

Applications for Directions do not have to include a detailed discussion of the mitigation measures in place to prevent a release; the likely fate of the release; the proposed response measures; or the potential environmental impacts of a release. However, it is necessary to provide a brief summary of that information, including the output of the worst-case release modelling undertaken to identify the fate of the release and the potential environmental impact. An explanation should be provided if the modelling is not based on the hydrocarbon type(s) and flow rate(s) detailed elsewhere in the application for a Direction, or if any of the information provided in the summary differs from the information included in the OPEP, the OPEP justification or any relevant ES. All documents relevant to the summary should also be referenced in the application for a Direction. Operators are also required to include confirmation that they have considered the conclusions and recommendations detailed in the various reports relating to the Deepwater Horizon accident, and any relevant reports of other blow-out events, and to confirm that appropriate measures have been taken into consideration during the development of the management plan for the proposed activity. It is unnecessary to discuss those measures in the application for a Direction, but the operators of specific wells may be contacted and asked to separately provide additional information in relation to the
conclusions and recommendations of the reports and the proposed management measures.

9. **Other Risk Factors**

Environmental Statements and applications for Directions should identify any risk factors that are pertinent to the impact assessment, such as abnormal reservoir temperature or pressure (particularly if the reservoir is High Pressure and High Temperature (HP/HT)), whether it is a particularly deep reservoir or whether there are shallow gas deposits in the area, in addition to the detail currently provided in relation to environmental sensitivities, risks and potential impacts. Acknowledging the risks and confirming that appropriate mitigation is in place is likely to speed up, rather than delay, the determination, as it will avoid the requirement to seek confirmation from the applicant or third parties.

10. **Quality Control**

DECC must receive reliable, consistent and complete submissions, and receive sufficient notice, to complete the determinations to meet the operators’ requirements. It is therefore essential that operators undertake quality control checks, and provide as much notice as possible. Operators are reminded that Environmental Statements are subject to Public Notice, and that copies of applications for Directions can be obtained upon request to DECC. The general public therefore has an opportunity to review submissions, and many complaints following the *Deepwater Horizon* accident have related to the quality of the submission rather than the information provided, and all complaints can result in a delay.
Drilling operations are subject to a number of environmental controls administered by Department of Energy and Climate Change (DECC). In addition to requiring approval under the EIA Regulations, it will be necessary to apply for a Chemical Permit. It may also be necessary to apply for an Oil Discharge Permit if there are any planned discharges of reservoir hydrocarbons, a Consent to Locate if the activity is being undertaken using a Mobile Drilling Unit (MoDU), and a Survey Consent if the activity includes a Vertical Seismic Profile (VSP). Well intervention and abandonment operations are not covered by the EIA Regulations, but the nature of the activities means that virtually all operations will be the subject of an application for a Chemical Permit, and there may also be requirements for an Oil Discharge Permit and a Consent to Locate for the vessel or MoDU undertaking the activity. In the case of well abandonment operations there may also be a requirement to obtain approval under the licensing provisions of the Marine and Coastal Access Act (MCAA) to remove elements of the well from the seabed. All drilling, well intervention and well abandonment operations also have to be covered by an Oil Pollution Emergency Plan (OPEP), and separate supplementary guidance has been prepared to cover OPEP submissions and procedures.

As well intervention and abandonment operations are not covered by the EIA Regulations, it is unlikely that they would be the subject of an Environmental Statement (ES), unless they are part of a larger project. For example, well intervention operations could be part of a project to increase production from a field, and the level of the increase could exceed the EIA Directive threshold and require an ES. Operators could therefore decide to include the well intervention activities in the ES. Similarly, well abandonment operations could be part of an application for a MCAA licence to cover a range of activities included in the field Decommissioning Programme, and an ES would be required to support that programme and the related application for a MCAA licence. Similarly, some well intervention and abandonment operations may form part of an activity that requires an application for a Direction under the EIA Regulations, such as a well intervention that would be followed by an Extended Well Test (EWT), or a well abandonment that was planned as part of a drilling operation. In cases where well intervention or well abandonment operations form part of an ES or an application for a Direction, the supplementary guidance relating to Environmental Statements and Direction Applications will apply.

Where there is no requirement to provide an ES or an application for a Direction under the EIA Regulations or to provide an ES under the licensing provisions of the MCAA, there will still be a requirement for provide an assessment of the potential impacts of the activity. This will usually be biased in terms of the nature of the application, for example applications for a Chemical Permit will concentrate on the proposed use and discharge of offshore chemicals; applications for an Oil Discharge Permit will concentrate on the oil discharges; and applications for a Consent to Locate will concentrate on the navigational issues. In the case of applications for a MCAA licence that are not supported by an ES, the impact assessment will be more general and similar to an application for a Direction under the EIA Regulations. In all cases, if there are implications under the Offshore Petroleum Activities
(Conservation of Habitats) Regulations 2001 (as amended), the relevant assessment will also have to address any potential impacts on protected habitats or species. For example, it would be necessary to address potential impacts on European Protected Species in the application for a MCAA licence to abandon a well if the abandonment operations included explosive severance to remove elements of the well from the seabed.

Where there is no requirement for an ES or an application for a Direction, the impact assessment that is provided in at least one of the environmental submissions should include a section dealing with accidental events, summarising the mitigation measures in place to prevent any release of hydrocarbons and the worst-case release scenarios that have been identified in the OPEP, as well as confirming that the potential environmental impacts associated with those scenarios have been assessed to underpin the OPEP process. Any documents relevant to the summary assessment, such as the OPEP, the OPEP justification document (see Sections 4.3 and 13 of the DECC Guidance Notes to Operators of UK Offshore Oil and Gas Installations – the OPEP Guidance) or any recent ES or application for a Direction that is relevant to the subject well or wells, should also be referenced in the assessment.

As virtually all well intervention and abandonment operations will be the subject of an application for a Chemical Permit, it is recommended that the assessment of accidental events is normally included in the application for a Chemical Permit. As these applications are submitted via the UK Oil Portal, the application must also include confirmation that the proposed operation is covered by an approved OPEP, or a current OPEP application. Where approval of the OPEP is still outstanding at the time of the application for a Chemical Permit, it will also be necessary to submit an update or variation of the application to provide confirmation that the OPEP has been approved. If a Chemical Permit is not required, the assessment of accidental events can be included in the application for a MCAA licence. If a MCAA licence is not required, it can be included in the application for an Oil Discharge Permit. If a number of environmental applications are required, there is no requirement to duplicate the assessment of accidental events, providing the application containing the assessment is referenced in the other applications. In the extremely unlikely event that none of these applications are required, DECC may require the operator to submit the OPEP justification document to support the OPEP for the proposed operations.

The majority of the guidance provided in relation to applications for Directions will also be relevant when preparing other environmental submissions. Applicants undertaking well intervention and abandonment operations are therefore advised to consult that supplementary guidance, to ensure that DECC has access to reliable, consistent and complete information and can develop an appropriate assessment of the potential risks associated with an activity, and to ensure that determinations do not result in any unnecessary delay.
Oil Pollution Emergency Plans (OPEPs) must be prepared in accordance with the requirements of the Merchant Shipping (Oil Pollution Preparedness, Response and Co-operation Convention) Regulations (OPRC) 1998 and the Offshore Installations (Emergency Pollution Control) Regulations (EPC) 2002. OPEPs must be approved by the Department of Energy and Climate Change (DECC), and should set out the “arrangements for responding to incidents which cause or may cause marine pollution by oil, with a view to preventing such pollution or reducing or minimising its effect”. The primary purpose of the OPEP is to inform the operator, so that they can implement a robust, effective and tested emergency response procedure. It is the operator’s responsibility to ensure that the OPEP clearly identifies the potential release scenarios, the potential environmental impacts, and how they would respond to mitigate those impacts. This supplementary guidance should be read in conjunction with the DECC Guidance Notes to Operators of UK Offshore Oil and Gas Installations (the OPEP Guidance). Issues that have been identified as requiring particular attention following the Deepwater Horizon accident are summarised in the following sections.

1. **Overall Function and Scope**

Operators are responsible for, and must be able to respond to, pollution incidents relating to their installations or infrastructure. The OPEP Guidance requires operators to produce a fit-for-purpose, operational document, that clearly sets out the procedures for responding to offshore oil pollution incidents in an effective and efficient manner, and in co-ordination with the UK’s National Contingency Plan.

The scope of an OPEP will cover many different activities and functions. When developing the OPEP, it is therefore essential that a multi-disciplinary team approach is used to capture operational, response and environmental requirements. Team members may include, but not be limited to, senior management, offshore and onshore operational personnel (including relevant contractors), offshore and onshore response personnel (including relevant contractors), Health, Safety and Environment (HS&E) advisors, insurance advisors etc. If contractors or environmental consultants are employed to develop and write the OPEP, relevant information must be provided and reviewed by appropriate personnel employed by the operator, to ensure that a robust and fit-for-purpose document is produced.

2. **Installations / Infrastructure Requiring an OPEP**

All installations, infrastructure and activities that could give rise to an oil pollution event on the UKCS must be covered by an OPEP. Details are provided in the OPEP Guidance (Section 3), and the requirement applies to fixed and floating installations, including MoDUs; gas, condensate and oil pipelines; and subsea facilities, including any connected third party infrastructure that is not the subject of a separate OPEP. If there is any doubt as to whether an OPEP is required, operators should contact the DECC Offshore Environmental Inspectorate.
OPEPs are therefore required for all exploration, appraisal and development drilling operations, and for all well intervention and abandonment operations, undertaken on the UKCS, and the OPEP Guidance details specific requirements for OPEPs relating to exploration, appraisal and development wells drilled from fixed installations and MoDUs. If an OPEP covers a number of wells, for example if there is a three-well drilling programme, all the wells must be identified in the submission. If only one of the wells is identified in the OPEP, DECC will assume that there is an outstanding submission for the other wells, even if the OPEP mentions a multiple-well drilling programme, and this will inevitably delay the determination of the OPEP, and could delay the determinations of other related environmental submissions.

Offshore oil and gas operators, MoDU operators and Well Intervention Vessel operators should note that a Shipboard Oil Pollution Emergency Plan (SOPEP) covers floating production facilities, MoDUs and well intervention vessels when they are in transit, but are not relevant once the vessels are engaged in oil and gas activities authorised by DECC. When undertaking such activities, an OPEP that has been approved by DECC must therefore be in place before the activities commence.

The facilities and activities covered by the OPEP must be clearly stated in the submission, and be consistent throughout the document. Where appropriate, a schematic should be included to identify the infrastructure covered by the submission, supported by the data in a table format.

3. Assessments of Worst-Case Scenarios

Section 4.2 of the OPEP Guidance specifies that operators must identify potential scenarios which could give rise to a pollution incident, including the worst-case scenarios. All OPEPs associated with exploration, appraisal and development (production) drilling operations, or work-over and intervention operations on hydrocarbon producing wells, that are undertaken on the UKCS must assess and provide for an effective response to an identified worst-case scenario where all containment barriers have failed resulting in a blow-out, that would normally require the drilling of a relief well, in addition to considering the worst-case scenario relating to the total loss of the installation’s hydrocarbon inventory.

The following information must therefore be taken into consideration when preparing the OPEP submission:

- Well and reservoir information relevant to the scale of potential releases of hydrocarbons, including information relating to the nature of the hydrocarbons and the well flow characteristics; the potential daily release rate; and the total quantity of hydrocarbons that could be released during the maximum time that it could take to stop the release. If there are reservoir characteristics relevant to this information, such as High Pressure and High Temperature (HP/HT) conditions, this information must be included.

- Identification of the worst-case scenario in relation to the potential release of reservoir hydrocarbons. For all operations relating to exploration, appraisal and
development wells (i.e. drilling, well intervention, and well abandonment) the worst-case scenario will be the quantity of reservoir hydrocarbons that could potentially be released if all containment barriers failed, i.e. a well blow-out with total loss of containment. The scenario should be directly related to the particular circumstances of the installation, the proposed activities, and the reservoir characteristics, and should be consistent with the information used by other operational departments, e.g. well engineering. For example, if the operation involves the drilling of a dry gas well, and no oil or condensate is expected; or there is insufficient reservoir pressure for a well to flow unaided; or if the flow rate is likely to reduce significantly during the period of any release, this should be reflected in the OPEP as it is likely that will affect the pollution response strategy and the assessment of any potential environmental impact. If the OPEP covers a number of wells, the highest flow rate well should be used to identify the worst-case scenario, and this should be explained in the OPEP and related environmental submissions as it may conflict with the information provided in applications relating to the other wells.

- Identification of the worst-case scenario in relation to the potential release of the installation hydrocarbon inventory, which will normally be the total diesel fuel inventory, although other inventories such as drilling fluid base oil may be relevant.

- The measures that would be taken to stop the worst-case release of liquid hydrocarbons from the reservoir, and an estimate of the maximum duration of the release. The latter could be a function of natural cessation related to the nature of the hydrocarbons and well flow characteristics, but will normally be the time taken to implement appropriate measures to stop or control the release (e.g. use of a capping or containment device), and the time taken to drill a relief well.

- Where appropriate, details of plans to implement the capping of a well and the drilling of a relief well to totally isolate the original well, to demonstrate that there is adequate planning or provision in place for these eventualities.

- Modelling data relevant to the worst-case release of liquid hydrocarbons, to meet the requirements specified in Section 5.2 of the OPEP Guidance and thereby identify the potential fate and spatial impact of the release. This should include the identification of the areas that could be impacted as a result of any release, including potential UK beaching locations, and the waters and potential beaching locations of adjacent States, and the likely time-frames for hydrocarbons to beach or cross a median line.

- A brief summary of the predicted environmental and socio-economic impacts of the worst-case release of liquid hydrocarbons, taking account of the results of the modelling undertaken to identify the areas that could be impacted as a result of any liquid hydrocarbon release and sensitivity data relevant to those areas.
• Details of the response strategy to conduct an effective and early intervention to protect the environment in the event of any liquid hydrocarbon release, including robust and location-specific arrangements based on the outcome of the modelling and the predicted environmental and socio-economic impacts. The information provided should include details of the pollution prevention and response equipment that the operator maintains or intends to access for deployment in the event of a release, or a potential release, and the time that it would take to deploy that equipment.

Although it is not relevant for well operations, the worst-case assessment of pipeline releases should be based on the total volume of liquid hydrocarbons present in the isolated pipeline and, in the case of major trunk lines, the modelling should assess three potential release locations, at the offshore installation; at the mid-point; and at a location as close to the landfall location as can be accommodated by the model.

Although the OPEP must always address the worst-case scenarios, operators are reminded that comparatively small releases of certain types of oil, or small releases in sensitive areas, or small releases in certain circumstances, have the potential to result in a significant environmental impact and may therefore require a substantial response.

4. Well Flow Rates

The worst-case scenario well flow-rate should be specific to the well that is the subject of the OPEP or OPEP Addendum, or the well with the maximum flow rate if the submission covers more than one well. The flow rate should be based on information relating to the particular installation, activity and reservoir, and should be provided in cubic metres per day or hour and the units clearly stated. The flow rate should be consistent with information included in the PON15 and any other relevant regulatory submissions, or any discrepancy should be explained. The selected flow rate should be used to calculate the predicted total loss of hydrocarbons during the period covered by the modelling, and during the estimated time taken to stop the release, and the calculated volumes should be clearly stated.

5. Modelling

Modelling should be carried out for the worst-case release scenarios to determine the fate of the released liquid hydrocarbons and the likely areas and extent of any potential impacts, including beaching locations and the potential for spills to cross any median line and beach on the coastline of adjacent States. The output should be considered alongside relevant environmental sensitivities, to inform the response strategy.

Stochastic models to determine the areas that could be impacted should use data that is relevant to the hydrocarbon types and the estimated uncontrolled flow rate. If the depth of the release beneath the sea surface could significantly affect the dispersion and fate of the released hydrocarbons, this should be taken into consideration in the study if it is a feature of the selected model, as it is likely to be
relevant to the environmental impact assessment. However, the deepwater release assessment cannot be relied upon for the purpose of developing a robust response strategy that accommodates all release scenarios, so it would also be necessary to separately model an equivalent surface release.

The models must be run for a period of time that is sufficient to identify the potential directions of travel and the areas likely to be at risk. As a minimum, the models must be run for a period of 10 days under worst-case liquid hydrocarbon release conditions, or until there are no released hydrocarbons remaining on the sea surface (i.e. until they have evaporated, dissipated or beached). If the minimum 10-day modelling period does not clearly identify the potential areas at risk, then the modelling period must be extended.

Trajectory modelling must use the same inputs as the stochastic modelling, and in accordance with Section 5.2 of the OPEP Guidance.

In all cases, the modelling must be undertaken using relevant weather, current and temperature data obtained from scientifically-validated historic data sources, and the origin of this information must be fully referenced.

DECC has determined that currently-available models are capable of meeting the above requirements, to enable operators to develop a competent response strategy that adequately addresses all potential release scenarios.

6. Oil Spill Counter Pollution Response

The initial response to any release should only be based on the available response resources. Any that are not immediately available to the operator, such as additional dispersant spraying capacity, spill containment and recovery equipment, well capping and containment devices or MoDUs and equipment that may be required to drill a relief well, but can be accessed if required, should be clearly identified and a timescale provided for provision of the relevant resources.

7. Dispersants

Operators must satisfy themselves that the reservoir hydrocarbons are likely to be amenable to dispersant treatment, if the latter is identified as a component of the response strategy. Where prior testing of dispersant efficacy is possible, it should be undertaken in accordance with the Marine Management Organisation (MMO) guidance.

If dispersant treatment is identified as a potential component of the initial response, the OPEP should confirm the type and quantity of dispersant held onboard the stand-by vessel. If the type of dispersant is critical, because of the nature of the reservoir hydrocarbons, this should be clearly stated and available sources identified in case the stocks need to be replenished or the standby vessel has to be relocated for any reason. If the stand-by vessel is replaced, provision must be made to maintain the dispersant response capability detailed in the OPEP.
8. **Capping Devices**

Where the use of a capping device is identified as a potential control option, operators must have suitable arrangements in place to implement such a response. The capping device must be suitable for the subject well, i.e. it can be deployed to attach to the well structure and can be used under the expected well pressure, and the source must be confirmed, including details of the nature of any contractual arrangements in place and relevant contractor contact details. The OPEP should also include relevant operator contact details, confirming who is responsible for securing the device and implementing the necessary arrangements for deployment in the event of an incident. Where operators and/or their contractors have specific source control plans relating to the use of capping devices, these should be referenced in the OPEP.

The OPEP should provide a clear breakdown of the anticipated timetable to take delivery of the equipment; to transport it to the well site; and to assemble; test and deploy the equipment to stop the flow from the well. This will inform the interim response and allow assessment of potential impacts during that period pending cessation of the release.

9. **Relief Wells**

Where drilling a relief well is identified as a potential control option, operators must provide details of their plans to initiate the management of such an operation, including details of the operator contacts responsible for initiating the relief well plan, and contact details of any contractor involved in the operation. Where relevant, confirmation should be provided of any communication or contracts with third party providers, so that the response personnel are aware of the equipment and personnel that may be available and how to proceed to access those resources.

It should be noted that DECC does not expect operators to have a contract in place for the provision of an alternative drilling unit, but there should be a plan in place to source a MoDU if one is required. The OPEP should therefore include details of any MoDUs or potential sources that have been identified, and confirm whether a specific type of MoDU would be required to drill the relief well. Again, where relevant, confirmation should be provided of any communication or contacts with third party providers, so that the response personnel know how to proceed to access an appropriate MoDU.

In the event of an incident requiring a relief well, operators must demonstrate that a relief well could be drilled in a timely manner. It will therefore be necessary to confirm that sufficient finance or insurance / indemnity provision is available to cover the eventuality; that consideration has been given to relief well design; that procedures are in place to implement a relief well management plan, supported by relevant specialist personnel; and that consideration has been given to sourcing a rig in the event that the facility drilling the primary well is not available. The OPEP should also provide a clear breakdown of the timetable to source a MoDU (including
provision for suspension of any current operations), to relocate the MoDU to the relief well site, and to drill the relief well and kill the original well.

10. **Environmentally Sensitive Areas**

Details of environmentally sensitive areas that could be impacted by a release should be obtained from appropriate contacts, such as the relevant fisheries authorities, e.g. the MMO or Devolved Authority; the relevant inshore pollution authorities, e.g. the Environment Agency or the Scottish Environment Protection Agency; and the relevant Statutory Nature Conservation Agencies, e.g. the Joint Nature Conservation Committee (JNCC), and Natural England or Scottish Natural Heritage.

Where required, a Shoreline Protection Plan must be prepared and submitted to DECC in accordance with the OPEP Guidance, and the relevant local authorities should be contacted in addition to the bodies detailed above to ensure that comprehensive and up-to-date environmental information is included in the plan.

11. **Socio-economic Impacts**

Any significant potential socio-economic impacts that could have a bearing on the response strategy should be summarised in the OPEP. For example, in certain areas, it may important to ensure that fishermen and/or fish farmers are regularly advised of the location and direction of movement of a spill; or it may be important to avoid using dispersants in areas where there would be a possibility of dispersed oil contaminating harvested or farmed shellfish stocks; or it may be necessary to take specific measures to prevent oil coming ashore in areas with a high amenity value. It is not necessary to try to quantify the economic impact, but any significant potential impacts should be identified and clearly linked to the response strategy.

12. **Areas of Potential Impact Outwith UK Waters**

Where the modelling indicates that a hydrocarbon release could impact areas outwith UK waters, the OPEP should provide details of the pollution control authorities in the relevant State or States, and any relevant international response agreements, such as the Norbrit Agreement. The OPEP should also provide details of where the operator would intend to obtain access to relevant information to assess the potential environmental and socio-economic impacts, including reference to any communication with the relevant bodies.

13. **Operations Control Unit Requirements**

The proposed location of the SoSRep Operations Control Unit (OCU) must be identified in the OPEP. Only one OCU location should be identified, as the SoSRep and his team require clear instructions about where to convene in the event of an incident. If an operator considers that it necessary to include alternative locations, prior approval must be sought from DECC. If an operator wishes to relocate the OCU, or amend the facilities provided, following submission of the review draft of the
OPEP to DECC, the Offshore Environmental Inspectorate must be contacted at the earliest opportunity. If the alternative proposals are acceptable, the operator will subsequently be required to submit an update of the OPEP prior to EPC approval.

OPEPs must identify the Emergency Operations Manager (EOM) and the Operator's Representative (or Representatives) who would attend the OCU (it should be noted that the same person cannot fulfil both roles in an active OCU). Details of the personnel positions and, if considered necessary, the personnel names should be included, as it is insufficient to state “a senior member of the company or similar will undertake the role”. The personnel must nevertheless be sufficiently senior to make decisions on behalf of the company.

For certain operations, such as drilling undertaken using a MoDU, the response arrangements may necessitate that the EOM and Operator’s Representative (or Representatives) are employees of the MoDU drilling contractor, and this must be clearly stated in the OPEP.

The EOM and the Operator's Representative (or Representatives), and other relevant response personnel, must be suitably trained, as detailed in the OPEP Guidance, and be aware of the expectations and requirements when participating in or supporting the OCU.

14. **Training and Exercise Requirements**

Details of the operator's training and exercise commitments must be included in the OPEP, highlighting the levels of training required for the response personnel and the refresher course intervals, and the frequency and scope of the OPEP exercises. The exercise requirements must be specific to the subject OPEP, and previous exercises in relation to other OPEPs will not be taken into consideration. This will be particularly relevant in the case of MoDU operations, where the exercise requirement must be related to a specific OPEP and a specific well. In all cases, operators must have systems and procedures in place to ensure that appropriate training is provided and maintained, and that the required exercises are completed.

15. **OPEP Justification Document**

OPEPs should be supported by an OPEP justification document (see Sections 4.3 and 13 of the OPEP Guidance), which can be developed from the Environmental Statement for a proposed activity or can be a separate stand-alone document. The content of the OPEP justification document must be aligned with the scope of the OPEP, and details of the assumptions, calculations, models and impact assessments that have been used to develop the OPEP can be included in the justification document, so that only summary information directly pertinent to the response strategy is included in the OPEP. In all cases, operators must ensure that the information provided in the OPEP and associated justification document is consistent with related documentation, such as well design / engineering plans, safety risk assessments and relevant environmental applications.
16. **Quality Control Checks**

The final draft of the OPEP must be reviewed by senior operator personnel involved in the proposed activity, before it is submitted to DECC for review. Operators can informally approach DECC to seek regulatory guidance on the development of an OPEP, but once the review draft is submitted to DECC it will be listed on the DECC Oil & Gas website and copies will be released to enquirers upon request. Quality control checks are therefore essential to ensure that the content is accurate and that the OPEP is relevant to the nature of the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements. Information within different sections of the OPEP must be consistent, and it must also be consistent with other environmental submissions relating to the same activity, e.g. with respect to well names and numbers, infrastructure details, worst-case well blow-out flow rates etc. It is unacceptable to provide submissions that have not been subject to a quality control check, and poor quality submissions will inevitably lead to a delay in the determination, and may lead to approval being withheld. If a submission is of such poor quality that it is rejected, any re-submission may also be subject to a further two month review period.

OPEPs should be produced on a case-by-case basis. Some information may overlap between OPEPs, but it is unacceptable to “cut and paste” information between OPEPs if the information is not relevant or specific to the nature of the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements. This can lead to errors when responding to incidents or to operators taking responsibility for actions and procedures that do not reflect their operations. If abbreviations are used, there should be a glossary of abbreviations appended to the submission, and if figures or tables are included, they should be legible, intelligible and clearly titled. Figures will normally be included to display the modelling results and, where appropriate, figures and accompanying tables are also recommended to clearly identify the infrastructure covered by the scope of the OPEP.

17. **Consultation Process**

The final review drafts of the OPEP must be submitted to DECC as a ring-bound hard copy, for ease of review; and in an electronic format (by e-mail to offshore.inspectorate@decc.gsi.gov.uk or on a CD), so that redacted copies can be provided in response to requests from interested parties. The OPEP must be accompanied by a completed submission cover sheet, which provides basic information on the scope of the submission and is used by DECC to assess any additional requirements prior to sign-off, including any inspection requirements. The cover sheet can be down-loaded from the DECC Oil and Gas website using the following link https://www.og.decc.gov.uk/environment/msr1998.htm.

Review copies should also be sent by e-mail to the following consultees:

All OPEPs:
Maritime and Coastguard Agency (MCA) - meor.meor@moga.gov.uk; and
Waters adjacent to England and Wales:
MMO - dispersants@marinemanagement.org.uk.

Waters adjacent to Scotland:
Marine Scotland (MS) - spillresponse@scotland.gsi.gov.uk.

If transmission isn’t possible because of the document size, copies should be provided on a CD.

Where the OPEP Guidance indicates that additional consultees are appropriate, copies should also be forwarded to the appropriate bodies, and details of the additional consultation should be included in the OPEP.

All the consultees provided with a copy of the OPEP should be advised to forward their comments to DECC, so that they can be taken into consideration during the review.

OPEPs are subject to a two-month consultation period, but it may be necessary to provide additional information or revise the draft, and the Offshore Environmental Inspectorate may wish to undertake an offshore inspection before specific approvals are issued for the proposed activity. Operators should, therefore, submit review drafts at least two months before the proposed commencement date, and are encouraged to submit the drafts as early as possible.

18. **Comments on Review Drafts**

OPEPs are reviewed and assessed on a case-by-case basis, taking account of the nature of the installation, the proposed operations, the environmental sensitivities the potential environmental impacts and the proposed response arrangements, and taking account of the comments received from consultees. The DECC response to the submission will therefore be specific to the subject OPEP, although some advice and comments, and clarification of the guidance or policy, may be relevant to other OPEPs already submitted for review or the preparation of future submissions. Operators should therefore have systems and procedures in place to ensure that there is effective dissemination of relevant comments.

DECC comments on submissions must be addressed by the operator, and it is not acceptable to ignore the comments, or to re-submit applications where specific comments have not been addressed. Both will inevitably delay completion of the review process. However, if there are valid reasons for not addressing a particular comment, this should be explained in correspondence covering the re-submission, or discussed with DECC as soon as possible. Operators should also ensure that they fully understand the comments received, rather than basing a re-submission on assumptions or only partially addressing the comments. All communications relating to the comments on an OPEP submission should be submitted by e-mail to offshore.inspectorate@decc.gsi.gov.uk.
19. **OPEP Approval**

Once any comments have been satisfactorily addressed, operators will be notified of approval under the OPRC and EPC Regulations. Following approval, a hard-copy (paper) and electronic copy (pdf format) of the OPEP, the “Controlled Copies”, must be submitted to DECC for retention by the Offshore Environmental Inspectorate.

Controlled Copies must also be forwarded to:

- **All OPEPs:**
  - MCA – the MRCC station nearest to the location of the proposed operations; and
  - JNCC - [jnccadviceotdtt@jncc.gov.uk](mailto:jnccadviceotdtt@jncc.gov.uk);

- **Waters adjacent to England and Wales:**
  - MMO - [dispersants@marinemanagement.org.uk](mailto:dispersants@marinemanagement.org.uk).

- **Waters adjacent to Scotland:**
  - Marine Scotland (MS) - [spillresponse@scotland.gsi.gov.uk](mailto:spillresponse@scotland.gsi.gov.uk).

The MRCC copy should be on a CD (preferred) or as a hard copy, as the local stations cannot accept Controlled Copies via e-mail. The other copies should be sent by e-mail or, if transmission isn’t possible because of the document size, on a CD. Where requested, copies should also be forwarded to any additional consultees.

Operators are reminded that DECC and other Controlled Copy holders must be advised when there is cessation of the operations covered by the OPEP and it is no longer required. This allows them to dispose of the redundant OPEP, and prevents unnecessary auditing of completed operations.

20. **OPEP Maintenance**

Section 14.4.1 of the OPEP Guidance details the requirement to regularly review OPEPs, and Section 15 of the guidance details the action that should be taken following approval of the OPEP.

OPEP’s are “living documents” and should be reviewed on a regular basis to ensure they remain current and applicable to the installation, the proposed operations, the environmental sensitivities, the potential environmental impacts and the proposed response arrangements. Where appropriate, they will also need to be updated to take account of any changes relating to the operator. If the changes are significant, such as a new operator or the addition of a new activity, the revised OPEP will normally be subject to a two-month consultation period prior to any acceptance of the changes. However, if the changes relate to the strengthening of the response arrangements, it is unlikely that it would be considered necessary to insist upon formal consultation, although DECC may still wish to comment on the changes and enter into a dialogue with the operator or specific consultees.
When reviewing an OPEP, operators must take full account of the Regulations, the OPEP Guidance and best practice. When reviewing an OPEP to include new exploration, appraisal and development (production) drilling operations, or new intervention or abandonment operations relating to hydrocarbon producing wells, the requirements detailed in this supplementary guidance should also be taken into consideration.

In addition to ad hoc operator reviews, all OPEP’s are subject to a formal review that must be undertaken at least every five years after the date of initial submission. If the operator is still carrying out operations covered by the OPEP, it must be revised to take account of any new or amended guidance and re-submitted to DECC and the relevant consultees at least two-months prior to the date of “expiry” of the five-year validity period. Although the OPEP must be reviewed every five years, operators can submit a revised document for formal review at any time during that period.

Following approval, the amended submission must be forwarded to all Controlled Copy holders in a timely manner.
Guidance Relating to Environmental Reviews and Inspections

The Department of Energy and Climate Change (DECC) does not restrict its consideration of environmental issues to the assessment of applications for regulatory approval, and may require additional information, onshore and offshore reviews and onshore and offshore inspections to provide the necessary level of assurance that:

- All necessary measures have been taken to manage the activities, the environmental impacts and compliance with the environmental regulations and related approvals;
- Appropriate action has been taken to mitigate the risk of environmental incidents; and
- Appropriate pollution control and response arrangements are in place in the event of an environmental incident.

Proposed activities are assessed on a case-by-case basis, and additional assurance will normally be sought for drilling operations that fall into the following categories:

- Operations involving new operators and/or drilling contractors;
- Operations involving MoDUs that have not undertaken recent work on the UKCS;
- Exploration, appraisal and development wells that are located:
  - In deepwater (>300 metres water depth); and/or
  - To the west and north of Shetland, or in the Moray Firth or Irish Sea; and
- All High Pressure / High Temperature (HP/HT) wells.

Additional assurance may also be sought for other wells, but this will be the exception rather than the rule.

Potential requirements are summarised below.

1. **Environmental Management System (EMS)**

Licensed operators must have an independently verified EMS, in accordance with OSPAR Recommendation 2003/5 and the requirements detailed in DECC guidance. Operators may therefore be required to confirm that they have a verified EMS, or to confirm the verification status if this is due for renewal. They may also be required to provide a review of any actions being progressed to demonstrate implementation of the EMS and/or strengthen the environmental management.
Where contractors (including sub-contractors) are employed to carry out operations on behalf of the operator, it is recommended that they should also have an EMS that is compatible with a recognised standard. The operator may therefore be required to confirm that the contractors have an appropriate EMS, and to provide a copy of relevant interface documents detailing how the licensed operator’s EMS interfaces with the contractor’s EMS. Where a contractor does not have an EMS, the operator must be able to demonstrate how the requirements of the operator’s EMS will be implemented by the contractor during the proposed operations, and what actions will be taken to ensure compliance with those requirements.

2. **OPOL and Indemnity Arrangements**

Operators may be required to provide proof of OPOL membership, and that it covers the proposed activity, and to provide confirmation that their insurance indemnity provision includes the following:

- Operations to stop or control the release of hydrocarbons in the event of a well blow-out, such as the deployment of a capping device and the drilling of a relief well;
- Clean-up costs associated with any spill, including a worst-case well blow-out; and
- Remediation of pollution damage, including liability to third parties.

Confirmation of suitable insurance indemnity provision will normally entail the provision of a copy of the insurance policy, together with a summary of the level of insurance cover and an explanation of the process undertaken to determine the risks and the level of cover required to cater for those risks.

3. **Environmentally Critical Equipment**

Operators of drilling and production installations must identify Environmentally Critical Equipment (ECE), and ensure that is included in their Maintenance Management Systems (MMS). The planned maintenance of ECE must then be implemented to ensure integrity and proper functioning. Operators may therefore be required to confirm that appropriate ECE has been identified, and to provide details of any planned or completed maintenance and tests undertaken to ensure integrity and proper functioning, particularly in relation to equipment for the prevention of, and response to, incidents with the potential to have a significant impact on the environment. For example, this could include details of the planned testing programme for the BOP, and for the provision and testing of a suitably-certified ROV or other intervention equipment in the event of an incident.

4. **Internal and External Audits**

Operators may be required to provide details of any audits (both internal and external) that have been undertaken by the operator or contractors to provide
assurance that the MoDU and drilling operation management systems and the procedures developed to prevent environmental incidents are robust. This should include a summary of any key audit findings, an outline of how audit findings are recorded, tracked and closed-out, and details of the frequency and scope of any audits planned during the proposed operations.

5. **DECC Inspections and Instructions**

Where relevant, operators may be required to provide confirmation of progression or close-out of any outstanding actions relating to previous DECC environmental inspections, or relating to previous communications with the operator or drilling contractor.

6. **Major Spill Reports**

Operators may be required to provide confirmation, usually in the form of a written statement, that they have considered and taken account of the conclusions and recommendations contained in reports into the Deepwater Horizon and Montara accidents, where those conclusions and recommendations are relevant to the planned activity. The level of detail required will be related to the planned activity, as many of the conclusions and recommendations are specifically related to deepwater drilling operations. A list of the main reports relating to the Deepwater Horizon and Montara accidents is appended to this document, but it is not comprehensive and further reports may have been published that are relevant to specific operations.

7. **Competency, Training and Exercises**

Operators and their contractors may be required to provide details of the procedures implemented to ensure the competency and effective training of personnel undertaking the operations. This will include demonstration that standards are set for competency at all levels, which are specific to the personnel positions and tasks, and that there is appropriate assessment of the training to ensure that it is proportionate to the hazards and risks associated with the tasks. Operators are therefore advised to discuss these requirements with their contractors as early as possible, to ensure that all parties are fully aware of the relevant competencies and training for specific roles and responsibilities and to confirm that the standards meet the operator’s expectations.

Where relevant procedures are not currently in place, operators and/or contractors will be required to provide a detailed time resourced plan, and confirmation of how this will be implemented, to demonstrate how they intend to meet the competency and training requirements.

Operators may also be required to organise and undertake an onshore desktop emergency response exercise, witnessed by the Offshore Environmental Inspectorate, to assess competency and the adequacy of the onshore arrangements.

8. **Operational Procedures**
Operators may be required to provide confirmation of specific aspects of planned or current activities, particularly in relation to the timings, the working methods, the roles and responsibilities, and the plans and procedures in place to ensure that the activities are undertaken in accordance with the relevant management systems and commitments detailed in the regulatory submissions (e.g. the Environmental Statement, the application for Direction, the applications for Chemical and Oil Discharge permit and the Oil Pollution Emergency Plan). This should include reference to the management of contractors and relevant interface documents; clarification of the respective roles and responsibilities, and the competency and training of the relevant personnel; details of the management of change procedures; and reference to any relevant audits undertaken to demonstrate that the procedures are robust.

Operators should therefore ensure that plans and procedures are developed at an early stage; that they are subjected to a robust review process involving personnel with relevant technical expertise; and that they can be clearly understood and effectively implemented. Where appropriate, for example for safety or environmentally critical tasks, for complex tasks or for tasks that are only infrequently performed, the procedures should include step-by-step instructions so that the tasks can be carried out safely and prevent or minimise any environmental impact. The procedures should be specific to the installation and the equipment on board, rather than generic documents, and there should be systems in place to ensure that they are followed by the operator and contractor personnel undertaking the tasks, and that they are regularly maintained.

Where tasks have the potential for a significant environmental impact, operators should also provide a detailed description of the activities and the mitigation procedures in the relevant environmental regulatory submissions.

9. **Additional Considerations**

Following receipt of the environmental regulatory submissions, DECC will undertake an internal review to determine whether any or all of the additional requirements detailed above are appropriate for the proposed activities. DECC will then advise the operator of their requirements, and what action should be taken to satisfy those requirements. In some cases written submissions will be reviewed prior to the approval of regulatory submissions. In other cases the reviews may follow approval. Where there are significant concerns in relation to the regulatory submissions and/or the written submissions, DECC may also request an onshore regulatory review meeting with the operator and relevant contractors, prior to the issue of any approvals, which may take place at DECC or the operator’s premises.

As it is possible that a review of written submissions, or a full regulatory review meeting, will be required prior to the approval of regulatory submissions, failure to consider these additional requirements in advance could significantly delay the proposed operations. DECC may also require the amendment of unsatisfactory submissions, and/or another meeting with the operator and relevant contractors,
which could exacerbate the delay. Operators are therefore advised to take these potential requirements into consideration when preparing their regulatory submissions, and to ensure that those submissions, particularly where they relate to the drilling operations that fall into the categories detailed in the introduction to this environmental review and inspection guidance, are submitted well in advance of the proposed spud date, to accommodate potential requests for additional information.

Depending upon the nature of the activities, and the outcome of the review of written submissions or any meetings, DECC will assess the environmental inspection requirements, which could involve one or more of the following:

- Pre-spud installation inspection - the approval of regulatory submissions may be delayed until any significant issues identified during the inspection have been satisfactorily addressed;
- Inspection during drilling operations, before drilling reaches the hydrocarbon bearing reservoir;
- Inspection during drilling operations within the hydrocarbon bearing reservoir, or during other specific operations; and
- Inspection during any stage of the drilling operations, as determined by DECC’s inspection programme.

Whether to undertake an environmental inspection will also take account of any recent inspection of the installation, and the outcome of that inspection.

To avoid any unnecessary delays relating to the provision of additional information or a pre-spud inspection, operators intending to undertake drilling operations that fall into the categories detailed in the introduction to this environmental review and inspection guidance are strongly advised to contact the Offshore Environmental Inspectorate prior to the preparation of regulatory submissions. The timing of this contact should be sufficiently in advance of the proposed activities to ensure that there is sufficient time to accommodate any DECC requirements.
## Published Deepwater Horizon and Montara Reports

<table>
<thead>
<tr>
<th>Doc Ref</th>
<th>Source</th>
<th>Author</th>
<th>Title</th>
<th>Date</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Select Committee</td>
<td>House of Commons Energy and Climate Change Committee</td>
<td>Tim Yeo, MP</td>
<td>UK Deepwater Drilling—Implications of the Gulf of Mexico Oil Spill</td>
<td>06-Jan-11</td>
<td><a href="http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/450/45002.htm">http://www.publications.parliament.uk/pa/cm201011/cmselect/cmenergy/450/45002.htm</a></td>
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<tr>
<td>Commission on BP DWH Oil Spill</td>
<td>National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling</td>
<td>Senator Bob Graham and William K Reilley</td>
<td>Recommendations of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (Presidential Report)</td>
<td>11-Jan-11</td>
<td><a href="http://www.oilspillcommission.gov/">http://www.oilspillcommission.gov/</a></td>
</tr>
<tr>
<td>Commission on BP DWH Spill</td>
<td>National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling</td>
<td>Chief Counsel</td>
<td>Macondo – Chief Counsel’s Report 2011</td>
<td>17-Feb-11</td>
<td><a href="http://www.oilspillcommission.gov/">http://www.oilspillcommission.gov/</a></td>
</tr>
<tr>
<td><strong>Joint Investigation Team (JIT) - Preliminary Reports.</strong></td>
<td><strong>Deepwater Horizon JIT</strong></td>
<td><strong>US Coastguard</strong></td>
<td><strong>Report of Investigation into the Circumstances Surrounding the Explosion, Fire, Sinking and Loss of Eleven Crew Members Aboard the Deepwater Horizon.</strong></td>
<td><strong>11-Apr-11</strong></td>
<td><a href="http://homeport.uscg.mil/cgi-bin/st/portal/uscg_docs/MyCG/Editorial/20110422/FINAL%20REDACTED%20VERSION%20DWH.pdf?id=334b0c703b7436a044d6b22764b603cd133d42b">http://homeport.uscg.mil/cgi-bin/st/portal/uscg_docs/MyCG/Editorial/20110422/FINAL%20REDACTED%20VERSION%20DWH.pdf?id=334b0c703b7436a044d6b22764b603cd133d42b</a></td>
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