

Decommissioning of International Petroleum Facilities Evolving Standards & Key Issues

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1. Introduction

The international law on the decommissioning of petroleum facilities is evolving in various jurisdictions throughout the world. Depending upon the situation, the laws applicable to decommissioning can be quite complex, sometimes vague and even contradictory. The legal framework for onshore decommissioning is determined by reviewing the following:

- National Law
- Host Government Contract

The legal framework for decommissioning offshore facilities is usually more complex and encompasses the following items:

- International Conventions
- Regional Conventions
- National Law
- Host Government Contract

Given the migratory nature of pollution in international waters, various international and regional conventions have been implemented which address offshore decommissioning (See Appendix 1). There are no similar conventions for onshore facilities and thus the decommissioning of such facilities is governed strictly by the national or domestic law of the jurisdiction where the facilities are located and, where applicable, the particular Host Government Contract covering the operation of the facilities.

Facilities located in joint development zones or pipelines which cross one or more international boundaries are unique in that they usually require bilateral treaties between sovereign states. The decommissioning of such facilities or pipelines would thus be governed by the terms of those specific bilateral treaties and are not discussed in this paper.

The legal issues to be addressed in any decommissioning project and which are reviewed in this paper are:

- Removal of petroleum facilities

- Disposal of petroleum facilities
- Obligation to pay for removal and disposal
- Residual liability

The paper will first review the international and regional conventions that impact offshore decommissioning. The paper will then discuss national law and as an example, cite the laws of a major oil producing country. Host Government Contracts will then be reviewed. Finally, the issues of who must pay for the decommissioning of facilities and the residual liability associated with such facilities will be analyzed.

2. *International Conventions*

The international legal framework on offshore decommissioning and abandonment has developed over the last fifty years. There are three major international conventions and one set of non-binding guidelines that apply to the removal and disposal of offshore installations. They are somewhat contradictory in their requirements and their applicability to any platform decommissioning depends upon whether the particular jurisdiction where the platform is located has ratified the convention in question.

1958 Geneva Convention on the Continental Shelf

The first major international convention concerning the *removal* of offshore installations is the 1958 United Nations Geneva Convention on the Continental Shelf (“Geneva Convention”). The critical provision is Article 5(5), which states that:

“Any installations which are abandoned or disused must be entirely removed.”

Article 5(5) provides an explicit obligation of total removal and does not allow its 57 contracting parties to do anything less than this requirement. This text has arguably been superseded by a different and more flexible approach in the LOS Convention discussed below.

The Geneva Convention does not identify pipelines as part of the infrastructure to be removed. Therefore, one can argue that this Convention does not place a strict obligation to remove pipelines. This Convention only has a minimal reference to living marine resources (in Article 5(2)) and does not place an explicit requirement to protect the offshore environment.

1972 London Dumping Convention

The second major convention concerning the *disposal* of offshore installations is the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (“London Dumping Convention”). This Convention defines dumping as:

- 1) Any deliberate disposal at sea of wastes, or other matters from vessels, aircraft, platforms or other man-made structures at sea;
- 2) Any deliberate disposal at sea of vessels, aircraft, platforms or other manmade structures at sea.

It is applicable to all marine areas except the internal waters of a coastal state. It is now generally accepted that the abandonment of a structure (such as an offshore platform) at sea, either totally or partially, is considered dumping under the definition of the London Dumping Convention. This general understanding was confirmed by a new Protocol adopted by a special meeting of the contracting parties to the London Convention on 7 November 1996. Under this Protocol, the definition of 'Dumping' in the convention was updated and expanded to explicitly include: "Any abandonment or toppling at site of platforms or other man-made structures at sea, for the purpose of deliberate disposal." Therefore, the London Dumping Convention clearly covers the disposal of offshore platforms at sea, either totally or partially.

If a toppled platform is converted to an artificial reef, it falls within the jurisdiction of the London Dumping Convention. But it is for the coastal state to decide whether such an activity is contrary to the aims of the London Dumping Convention. The state is simply required to conduct a case assessment and then make a decision whether the activity is allowed or not. No agreement has been reached under the Convention on whether abandonment of pipelines constitutes "dumping".

The basic rules of the London Dumping Convention are provided in Article IV which contains a general prohibition against dumping of any "wastes or other matter in whatever form or condition except as otherwise specified". This Article lists specific substances and types of wastes and how they are to be handled:

- Annex I (the "black list") prohibits the dumping of "highly hazardous" substances.
- Annex II (the "grey list") requires the issuance of a "special permit" (defined in Article III as a "permission granted specifically on application in advance") for the dumping of the listed substances.
- Annex III requires a "general permit" (defined in Article III as a "permission granted in advance") for the dumping of all other substances.

In accordance with Article VI, each Contracting Party must designate an appropriate authority or authorities to issue special and general permits in accordance with detailed criteria listed in Annex III to the Convention. The London Dumping Convention very clearly states that Contracting Parties to the Convention by their national laws may take more stringent measures than those provided by the Convention, in particular with regard to the complete prohibition of the dumping of certain substances.

The Eleventh Consultative Meeting of the Contracting Parties to the Convention agreed that the IMO Guidelines described below were acceptable from the viewpoint of the

London Dumping Convention. The Scientific Group at its twelfth meeting agreed that the existing Annex III provisions and the IMO Guidelines were sufficient to address the environmental aspects of the disposal of offshore platforms and installations at sea and that the further development of specific guidelines was not necessary.

1982 UN Law of the Sea Convention

Article 60(3) of the 1982 United Nations Convention on the Law of the Sea ("LOS Convention") specifically provides for decommissioning, in particular the *removal* of offshore installations. It states that:

“Any installations or structures [in the exclusive economic zone] which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization. Such removal shall also have due regard to fishing, the protection of marine environment and the rights and duties of the other states. Appropriate publicity shall be given to the depth, position and dimensions of any installation or structures not entirely removed.”

Article 80 of the LOS Convention states that Article 60 applies *mutatis mutandis* to artificial islands, installations and structures on the continental shelf. The ambiguous wording of Article 60 appears to envisage a basic rule of removal, with something less being possible by reference to certain international standards. Although Article 5(5) of the Geneva Convention requires installations in the continental shelf to be “removed entirely”, Article 60(3) of the LOS Convention requires simple “removal”. The term “entirely” has been omitted. Consequently, the obligation to remove installations and structures exists under the LOS Convention, but it could be set aside by coastal states, so long as they adhere to the international standards established in this regard.

Similar to the Geneva Convention, the LOS Convention does not explicitly require the removal of pipelines; however, it does provide some general principles on marine pollution. Article 194 of the Convention requires its more than fifty signatory states to conduct decommissioning operations in a manner that would not damage the marine environment or cause injury to other states.

As stated above, the LOS Convention recognizes that partial removal is permissible whereas, the Geneva Convention requires installations to be removed entirely. The two Conventions have thus imposed conflicting treaty obligations on signatory countries. There are a number of legal theories that attempt to address such treaty conflicts. The majority view is the textual approach, which accepts the language in Article 5(5) of the Geneva Convention as clear, unequivocal and straightforward. It has only one meaning: any offshore facility must be completely removed from the site at the end of its project life. The result from using this approach is that a country that has ratified the Geneva Convention is bound by its stricter obligations regardless of whether it has later ratified the LOS Convention. The minority approach is called teleological. It argues that the conflicting provisions need to be construed flexibly by applying the general rule of treaty

interpretation found in the Vienna Convention on the Law of Treaties, which states that a treaty should be interpreted in good faith, in accordance with its ordinary contextual meaning and in light of its object and purpose. This would allow the more flexible approach of the later LOS Convention to take precedence and eliminate the legal obligation and practical need for complete removal of petroleum facilities.

IMO Guidelines

The “generally accepted international standards” provided in the LOS Convention were issued in 1989 by the International Maritime Organization (IMO) in the form of the IMO Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone ("IMO Guidelines"). The major points in the IMO Guidelines are:

- 1) the general principle is that all disused installations “are required to be removed”;
- 2) Installations in water depths of less than 75 metres, or 100 metres after 1 January 1998, and weighing less than 4,000 tonnes should be removed unless:
 - a) not technically feasible;
 - b) involving extreme cost; or
 - c) constituting unacceptable risk to personnel or the marine environment;
- 3) an unobstructed water column of 55 metres must be left in the event of a partial removal;
- 4) all installations after 1 January 1998 are to be designed and built so that their entire removal is feasible.

The IMO Guidelines do not have the status of international law and are therefore not binding on states. Instead, the IMO Guidelines have the status of a recommendation. They impose a general removal principle on coastal states requiring that all disused installations and structures should be entirely removed, except when special circumstances consistent with the IMO Guidelines can be shown to apply. The removal operation should be performed as soon as it is reasonably practicable after abandonment or permanent disuse and the IMO should be notified of any installations and structures not entirely removed.

The IMO Guidelines require a case-by-case approach to determine such special circumstances where the coastal state may allow an offshore installation, or structure or part thereof to remain on the seabed, on the basis of a number of evaluations.

Existing installations in water depths of greater than 75 metres (or 100 metres if installed after 1 January 1998) or weighing more than 4,000 tonnes can be wholly or partially left in place, provided it is shown that they do not cause unjustifiable interference with other users of the sea. However, there is no exception to complete removal where the installation or structure is located in approaches to ports, or in straits used for international navigation, in customary deep draught lanes and IMO adopted routing systems.

Where installations or structures remain above the surface of the sea they should be adequately maintained to prevent structural failure. In the case of partial removal below the sea surface, an unobstructed water depth of no less than 55 metres should be provided and the coastal state should satisfy itself that any residues will remain permanently on the sea bed and not move under the influence of waves, tides, currents, or other foreseeable natural causes so as to result in a hazard to navigation. The IMO Guidelines do not specifically mention pipelines; but they do provide that the coastal state should give “specific official authorization identifying the condition under which an installation or structure, or parts thereof, will be allowed to remain on the sea-bed.”

Any materials not removed should be indicated on nautical charts and where necessary properly marked with aids to navigation. There is a responsibility to ensure that these aids to navigation are maintained and to monitor the condition of any remaining material so as to ensure continued compliance with the Guidelines. The coastal state is required to ensure that the legal title to installations and structures which have not been completely removed is unambiguous, and that the responsibility for maintenance and liability for future damages is clearly established.

The IMO Guidelines also make specific mention of artificial reefs, indicating that where living resources can be enhanced by the placement on the seabed of material from removed installations or structures (i.e. to create an artificial reef), such material should be located well away from customary traffic lanes, taking into account the IMO Guidelines, and other relevant standards for the maintenance of maritime safety.

Paragraph 3.3 of the Guidelines states that “the means of removal or partial removal should not cause a significant adverse effect on living resources of the marine environment, especially threatened and endangered species”. This could be interpreted to mean that the use of large amounts of underwater explosives is not permitted even though explosives are required under modern removal technology. At a minimum, contractors should ensure that explosives and other removal techniques do not have a significant impact on the decommissioning site. Options for the removal of large piles of drill cuttings could also be limited as a result of this provision. Furthermore, in determining potential effects upon the marine environment of a planned removal, there is a requirement to consider “the potential for pollution or contamination of the site by residual products from, or deterioration of, the offshore installation or structure.”

A copy of the IMO Guidelines is attached as Appendix 2 since it is the most comprehensive and widely accepted international standard on the decommissioning of offshore platforms.

3. *Regional Conventions*

There are a variety of regional conventions around the world that superimpose themselves on the above international conventions. In the North Sea these are:

- 1972 Oslo Convention
- 1991 OSCOM Guidelines
- 1992 OSPAR Convention

There are regional conventions for the Mediterranean (Barcelona Convention), the Persian Gulf (Kuwait Convention), the Red Sea and Gulf of Aden (Jeddah Convention), the Black Sea (Black Sea Convention) and West Africa (Abidjan Convention).

An example of how a regional convention works is the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region ("Abidjan Convention"). It was signed 23 March 1981, and covers the coastal area from Mauritania to Namibia inclusive.

Article 3.3 of the Abidjan Convention states that it does not prejudice the requirements under the LOS Convention. Article 4.3 requires the Contracting Parties to "establish national laws and regulations for the effective discharge of the obligations prescribed in this Convention." Specific reference to the oil and gas industry is provided in Article 8 of the Convention:

"The Contracting Parties shall take all appropriate measures to prevent, reduce, combat and control pollution resulting from or in connection with activities relating to the exploration and exploitation of the sea-bed and its subsoil subject to their jurisdiction and from artificial islands, installations and structures under their jurisdiction."

There is no specific mention in the Abidjan Convention on the decommissioning, removal or disposal of offshore installations, infrastructure, platforms or pipelines.

4. *National Law*

Most countries either do not have laws and regulations in place to manage the decommissioning process; or if they do, they have not been tested in practice. The jurisdiction with the most experience is the U.S. Gulf of Mexico with more than 4,000 structures in place. There have been more than a thousand successful decommissionings under the regulations of the U.S. Federal Minerals Management Service ("MMS"). The North Sea has approximately 400 structures which make up approximately five percent of the 6,500 worldwide offshore platforms. They are just beginning to tackle the problem of decommissioning these installations at an estimated cost of US\$ 10 billion, which is more than 50 percent of the estimated total world cost. The UK has several statutes that govern the decommissioning process, including the Petroleum Act 1987 which requires government approval of abandonment plans, the Prevention of Oil Pollution Act 1972 which controls discharges of oil and the Control of Pollution Act 1974 which regulates the disposal of special wastes. A number of structures in the North Sea have been decommissioned; the most well known being the Brent Spar.

Decommissioning laws in the US and UK require the operator at a minimum to submit its decommissioning plan to the responsible ministry and to provide some sort of security to ensure performance of the decommissioning obligations. In the event the operator fails to fulfill its obligations, these national laws hold all of the owners jointly and severally liable and give the government the right to complete the decommissioning on its own and recover the costs from all of the owners. In jurisdictions such as the UK, this liability has been extended to parent companies and provides for criminal liability of officers, directors and managers when it can be proved that a punishable offence was committed through consent, connivance or negligence.

Nigeria is an example of an oil producing jurisdiction that is still developing its national decommissioning laws and has not yet had the opportunity to test them. Onshore facilities in Nigeria are clearly governed by Nigerian national law. Jurisdiction of Nigerian law over offshore facilities is established under international law where coastal states have the right to establish sovereign territorial waters extending from the low water mark out to a limit of 12 nautical miles. This claim is confirmed in the 1967 Territorial Water Act of Nigeria and in Section 1(2)(b) of the 1969 Petroleum Act of Nigeria which vests ownership and control of natural resources in Nigerian territorial waters to the Federal Government of Nigeria. Coastal states also have the right to exercise jurisdiction over their continental shelves which comprise the seabed to the edge of the continental margin or a distance of 200 nautical miles from the shore baseline and over their Exclusive Economic Zone (EEZ) which covers an area of the high seas 200 miles wide from the shore baseline. The Federal Government of Nigeria has confirmed its sovereignty over its continental shelf in Section 1(2)(c) of its 1969 Petroleum Act and over its Exclusive Economic Zone in its EEZ Act. Nigerian sovereignty over particular blocks and their production facilities is confirmed in the acreage description of the granting instruments issued by the Federal Republic of Nigeria:

"All that parcel of land contained in the Submarine Area in the Continental Shelf and Territorial Waters of the Federal Republic of Nigeria."

Granting instruments, such as Oil Prospecting Licences or Oil Mining Leases do not provide any specific contractual terms for dealing with decommissioning. Rather they refer to the petroleum regulatory structure of Nigeria:

"The licence is granted subject to the Petroleum Act 1969 and the regulations thereunder now in force or which may come into force during the continuation of this licence."

Section 9 of the Petroleum Act grants the Minister for Petroleum Resources ("the Minister") powers to make regulations for "the prevention of pollution of water courses and the atmosphere (and for) regulating the construction, maintenance and operation of installations." Pursuant to this section, the Minister has enacted the 1990 Petroleum (Drilling and Production) Regulations which are applicable to both onshore and offshore production activities. In Nigeria, there are no dedicated sets of laws or regulations dealing exclusively with the offshore sector.

Section 35 of the Petroleum Regulations requires that the licensee or lessee must submit an abandonment programme to the Director of Petroleum Resources ("DPR") for his approval before plugging or abandoning any well. There are no details on what such an abandonment programme should look like.

Sections 45 and 35 of the Petroleum Regulations appear to create two separate obligations on the licensee or lessee in relation to dealing with decommissioned wells. The first is that where the Minister is not interested in the well itself, the licensee or lessee must submit an abandonment programme to the Director of Petroleum Resources, and once such programme is approved, the licensee or lessee must then take steps to plug or otherwise deal with the well and its appurtenances below the christmas tree in a manner consistent with the approved abandonment programme. Secondly and as regards installations, drilling and production sites, the Regulations confer on the licensee or lessee the obligation to take "reasonable" steps to restore the petroleum drilling and production site to a state as close as possible to its original conditions. The licensee or lessee is also bound to remove "all buildings, installations, works, chattels and effects erected or brought by the licensee or lessee upon the relevant area for or in connection with his operations" subject to the interests of other parties and the Minister's expression of his desire to acquire the installation *in situ*. Installations would presumably include pipelines.

Based upon the above Regulations, there appears to be a complete removal obligation in Nigeria, except where the oil and gas facilities are to be taken over by the Minister, which option would presumably be exercised where the facilities can be used for some other useful purpose. The difficulty with the Regulations, however, is that they treat onshore and offshore facilities alike without taking into account the special nature of offshore facilities.

5. *Host Government Contracts*

There are a number of legal frameworks that governments around the world use to grant petroleum rights. They include:

- Concession or Royalty/Tax System
- Production Sharing Agreements
- Service Agreements
 - Risk Service
 - Pure Service
 - Buy Back

Concessions awarded under a Royalty/Tax system invariably rely upon a completely separate and distinct set of national laws to govern the decommissioning process. The concession documents themselves will not contain any direction on what is required to complete the decommissioning process. As government policy changes in this area, the decommissioning regulatory requirements will change accordingly. The United States, the United Kingdom and Canada are examples of this approach.

Production Sharing Agreements ("PSA") are considered to be stand alone laws in many jurisdictions which use them. There is quite often no separate and distinct petroleum law that governs petroleum operations. Thus, the PSA provides the sole source of how petroleum operations are begun and ended. The earliest PSA's did contain details on how petroleum operations were initiated, developed and produced but had no or very little provisions addressing abandonment or decommissioning. Instead, what was clear in those early PSA's is that the government owned the facilities through the process of cost recovery. Under international law, the owner of the petroleum facilities has the liability of abandonment. Therefore, because the government holds title to the facilities at the end of the PSA term, it has the liability. This was not necessarily what governments had in mind when they set up cost recovery systems under their PSA's, but unfortunately that is the price of owning the production facilities. Similar results occur with Service Agreements if the issue of who is responsible for abandonment is not explicitly addressed in the contract.

Depending upon the circumstances, international oil companies do not always rely upon the strength of their legal position that the party who holds title to the facilities at the time of abandonment is ultimately liable for the cost. In many cases, they have ongoing operations in the country and to ensure continuing good relations, they negotiate a reasonable and affordable process with the government to manage the decommissioning of fields and facilities that have reached their end.

6. *Residual Liability*

Residual liability is the potential obligation remaining after the decommissioning and disposal of petroleum installations and pipelines. It is presently unclear what those liabilities are under international law. They are not addressed under any of the international or regional conventions. Residual liability could be unlimited and in perpetuity and would include such matters as:

- Responsibility for maintenance and warning
- Contingent liability/future third party liability
- Insurance premiums
- Environmental impact and damage
- Compliance with future legal requirements
- Obligations to future generations

Normally, the tort law of the host country would determine residual liability. Most countries' tort laws provide that entities or persons who own property at the time of its shutting down will retain the residual liability. Some jurisdictions have imbedded this concept in their statutory petroleum regulations. For instance in the UK, the Department of Trade and Industry guidelines clearly state that the title owners, i.e., the oil company(s), are responsible in perpetuity for any residual liability. Over time, the costs associated with residual liability can be significant. Therefore, leaving any installation in place may not be a good idea. There may be some cases, e.g., in the North Sea, where the

structures are so huge, the costs so prohibitive and the technology not available to safely remove the entire structure, that some justification for only partially removing an offshore facility can be made. But this tends to be the exception rather than the rule.

7. *Conclusion*

In order to properly determine the legal obligations for the decommissioning process in any particular jurisdiction, one needs to review the following legal documents:

- International and regional conventions ratified by the country where the facilities are located. Also need to confirm if they are a member of the IMO in order to determine the applicability of the IMO Guidelines.
- National laws (if existent) on removal and disposal of facilities, along with handling and disposal of waste material.
- Host Government Contract (if applicable).

The issues to consider in this legal analysis are:

Removal of Facilities

One should assume that outside of the North Sea, the complete removal of offshore petroleum facilities is the norm. The conflict between the Geneva Convention and the LOS Convention on this issue is a bit academic in other areas of the world. In the long run, the complete removal of offshore platforms is in everyone's best interests, including oil companies. The IMO Guidelines confirm this position. Because of concerns around residual liability, affordability of complete removal in shallow waters and the expectation that standards will rise in the future, it is probably best to fully address the removal issue at the time of decommissioning. The North Sea is unique in the world because of the size of the structures, the cost and practicality of complete removal and the safety concerns around unproven technology. Partial removal will likely have to be part of the solution in that environment. The IMO Guidelines take this exception into account. Depending on the national regulatory scheme, toppling of offshore facilities and using them as reefs for improving fishing grounds is an option. It is certainly allowed under both the London Dumping Convention and the IMO Guidelines. But it is absolutely essential that the regulatory authorities fully approve this approach in a transparent and justifiable manner. Otherwise, this option may come back to haunt the facility owners.

The removal of petroleum facilities on land is a bit more straightforward. The national regulatory framework will determine what is acceptable. Since the logistics are easier, the complete removal of onshore facilities is usually more affordable and a more acceptable approach for all concerned. Given concerns around residual liability, partial removal should only be considered as a last resort, even though national laws may not explicitly require the complete removal of the facilities.

Disposal of Facilities

The London Dumping Convention will clearly apply to the disposal of facilities in international waters and its principles should be incorporated into the domestic laws of signatory countries. Therefore, the requirements of that Convention along with the IMO Guidelines should be the baseline for the disposal of any offshore platform. Best practice in this area would ensure that no hazardous waste is disposed in the sea and that dumping of facilities in either coastal or international waters is fully approved by the appropriate regulatory authorities after providing clear justification that onshore dismantling or recycling options are not available or not practical under the circumstances.

Once again, the national regulatory framework will provide the requirements around the disposal of onshore petroleum facilities. Even if the regulatory framework is not extensive on how this should be done, international companies should be concerned that they will be judged by international standards and should thus build those expectations into their onshore decommissioning process.

Operational Issues

Pipelines – The international and regional conventions reviewed do not address the removal of offshore pipelines. That is also true for most domestic laws. If it is addressed in domestic laws, it is typically only for the onshore environment, such as in the Nigeria example above. One jurisdiction that has had a lot of offshore experience is the U.S. Gulf of Mexico. MMS standard decommissioning practice provides that pipelines can remain *in situ* if the ends of the pipelines are plugged and buried 3 feet below the mudlines. MMS research shows that burial at this level serves as ample protection against exposure by the elements or scouring of the seabed. Getting government bureaucrats in other jurisdictions to consider this option is difficult, even if their own regulations do not specifically address or prohibit it. It is always easier for them to say no than to take the risk of doing something that they are not explicitly allowed to do even if it might be the safest and most practical thing. Therefore, reference to the experience of other jurisdictions, such as the Gulf of Mexico, and verification that the practice of leaving pipelines *in situ* is quite acceptable under international law may persuade regulatory authorities to consider and approve that option.

Explosives – Quite often the limited use of explosives in dismantling an offshore structure is safer, more practical and cheaper than other methods such as cutting the structure. However, there are legitimate concerns that explosives must not damage the environment nor harm marine life. None of the international or regional conventions explicitly prohibit the use of explosives. Rather they talk about operations that would not damage the fishing and the marine environment or cause injury to other states as in the LOS Convention or as in Paragraph 3.3 of the IMO Guidelines that “the means of removal or partial removal should not cause a significant adverse effect on living resources of the marine environment, especially threatened and endangered species.” Therefore, the use of explosives needs to be approached with caution and full regulatory approval should be obtained before proceeding. Experienced jurisdictions, such as the

U.S. Gulf of Mexico, do allow explosives under controlled conditions and their practice can be used as a good precedent.

Drill Cuttings – Nothing specific is said about drill cuttings in the conventions and very few domestic regulations deal with it. But they can be a real challenge in marine environments. The initial expectation in every decommissioning program is to remove everything that was put there and return the environment to its original pristine condition. However, the removal of drill cuttings could possibly cause more environmental damage than leaving them on location. Until removal technology improves, the retention of drill cuttings on site may be the safest environmental option at this time. But any such decision by a company should be accompanied with the necessary government approval.

Residual Liability

This will always be of concern to companies and their legal advisors responsible for decommissioning petroleum facilities. Even though the case law is presently limited, it will likely grow and expand over time. Therefore the most sustainable approach is to properly remove and dispose of as much (if not all) of the facilities that can safely be accomplished with minimum environmental impact at this time.

APPENDIX 1
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APPENDIX 2
IMO Guidelines

International Maritime Organization
Resolution A.672(16)
Adopted on 19 October 1989

**GUIDELINES AND STANDARDS FOR THE REMOVAL OF OFFSHORE
INSTALLATIONS AND STRUCTURES ON THE CONTINENTAL
SHELF AND IN THE EXCLUSIVE ECONOMIC ZONE**

1. GENERAL REMOVAL REQUIREMENT

1.1 Abandoned or disused offshore installations or structures on any continental shelf or in any exclusive economic zone are required to be removed, except where non-removal or partial removal is consistent with the following guidelines and standards.

1.2 The coastal State having jurisdiction over the installation or structure should ensure that it is removed in whole or in part in conformity with these guidelines and standards once it is no longer serving the primary purpose for which it was originally designed and installed, or serving a subsequent new use, or where no other reasonable justification cited in these guidelines and standards exists for allowing the installation or structure or parts thereof to remain on the sea-bed. Such removal should be performed as soon as reasonably practicable after abandonment or permanent disuse of such installation or structure.

1.3 Notification of such non-removal or partial removal should be forwarded to the Organization.

1.4 Nothing in these guidelines and standards is intended to preclude a coastal State from imposing more stringent removal requirements for existing or future installations or structures on its continental shelf or in its exclusive economic zone.

2. GUIDELINES

2.1 The decision to allow an offshore installation, structure, or parts thereof, to remain on the sea-bed should be based, in particular, on a case-by-case evaluation, by the coastal State with jurisdiction over the installation or structure, of the following matters:

- 1 any potential effect on the safety of surface or subsurface navigation, or of other uses of the sea;
- 2 the rate of deterioration of the material and its present and possible future effect on the marine environment;
- 3 the potential effect on the marine environment, including living resources;

- 4 the risk that the material will shift from its position at some future time;
- 5 the costs, technical feasibility, and risks of injury to personnel associated with removal of the installation or structure; and
- 6 the determination of a new use or other reasonable justification for allowing the installation or structure or parts thereof to remain on the sea-bed.

2.2 The determination of any potential effect on safety or surface or subsurface navigation or of other uses of the sea should be based on: the number, type and draught of vessels expected to transit the area in the foreseeable future; the cargoes being carried in the area; the tide, current, general hydrographic conditions and potentially extreme climatic conditions; the proximity of designated or customary sea lanes and port access routes; the aids to navigation in the vicinity; the location of commercial fishing areas; the width or the available navigable fairway; and whether the area is an approach to or in straits used for international navigation or routes used for international navigation through archipelagic waters.

2.3 The determination of any potential effect on the marine environment should be based upon scientific evidence taking into account: the effect on water quality; geological and hydrographic characteristics, the presence of endangered or threatened species; existing habitat types; local fishery resources; and the potential for pollution or contamination of the site by residual products from, or deterioration of, the offshore installation or structure.

2.4 The process for allowing an offshore installation or structure, or parts thereof, to remain on the sea-bed should also include the following actions by the coastal State with jurisdiction over the installation or structure: specific official authorization identifying the conditions under which an installation or structure, or parts thereof, will be allowed to remain on the sea-bed; the drawing up of a specific plan, adopted by the coastal State, to monitor the accumulation and deterioration of material left on the sea-bed to ensure there is no subsequent adverse impact on navigation, other uses of the sea or the marine environment; advance notice to mariners as to the specific position, dimensions, surveyed depth and markings of any installations or structures not entirely removed from the sea-bed; and advance notice to appropriate hydrographic services to allow for timely revision of nautical charts.

3. STANDARDS

The following standards should be taken into account when a decision is made regarding the removal of an offshore installation or structure.

3.1 All abandoned or disused installations or structures standing in less than 75 m of water and weighing less than 4,000 tonnes in air, excluding the deck and superstructure, should be entirely removed.

3.2 All abandoned or disused installations or structures emplaced on the sea-bed on or after 1 January 1998, standing in less than 100 m of water and weighing less than 4,000 tonnes in air, excluding the deck and superstructure, should be entirely removed.

3.3 Removal should be performed in such a way as to cause no significant adverse effects upon navigation or the marine environment. Installations should continue to be marked in accordance with IALA recommendations prior to the completion of any partial or complete removal that may be required. Details of the position and dimensions of any installations remaining after the removal operations should be promptly passed to the relevant national authorities and to one of the world charting hydrographic authorities. The means of removal or partial removal should not cause a significant adverse effect on living resources of the marine environment, especially threatened and endangered species.

3.4 The coastal State may determine that the installation or structure may be left wholly or partially in place where:

- 1 an existing installation or structure, including one referred to in paragraphs 3.1 or 3.2 or a part thereof, will serve a new use if permitted to remain wholly or partially in place on the sea-bed (such as enhancement of a living resource); or
- 2 an existing installation or structure, other than one referred to in paragraphs 3.1 and 3.2 or part thereof, can be left there without causing unjustifiable interference with other uses of the sea.

3.5 Notwithstanding the requirements of paragraphs 3.1 and 3.2, where entire removal is not technically feasible or would involve extreme cost, or an unacceptable risk to personnel or the marine environment, the coastal State may determine that it need not be entirely removed.

3.6 Any abandoned or disused installation or structure, or part thereof, which projects above the surface of the sea should be adequately maintained to prevent structural failure. In cases of partial removal referred to in paragraphs 3.4.2 or 3.5, an unobstructed water column sufficient to ensure safety of navigation, but not less than 55 m, should be provided above any partially removed installation or structure which does not project above the surface of the sea.

3.7 Installations or structures which no longer serve the primary purpose for which they were originally designed or installed and are located in approaches to or in straits used for international navigation or routes used for international navigation through archipelagic waters, in customary deep-draught sea lanes, or in, or immediately adjacent

to, routing systems which have been adopted by the Organization should be entirely removed and should not be subject to any exceptions.

3.8 The coastal State should ensure that the position, surveyed depth and dimensions of material from any installation or structure which has not been entirely removed from the sea-bed are indicated on nautical charts and that any remains are, where necessary, properly marked with aides to navigation. The coastal State should also ensure that advance notice of at least 120 days is issued to advise mariners and appropriate hydrographic services of the change in the status of the installation or structure.

3.9 Prior to giving consent to the partial removal of any installation or structure, the coastal State should satisfy itself that any remaining materials will remain on location on the sea-bed and not move under the influence of waves, tides, currents, storms or other foreseeable natural causes so as to cause a hazard to navigation.

3.10 The coastal State should identify the party responsible* for maintaining the aids to navigation, if they are deemed necessary to mark the position of any obstruction to navigation and for monitoring the condition of remaining material. The coastal State should also ensure that the responsible party* conducts periodic monitoring, as necessary, to ensure continued compliance with these guidelines and standards.

3.11 The coastal State should ensure that legal title to installations and structures which have not been entirely removed from the seabed is unambiguous and that responsibility for maintenance and the financial ability to assume liability for future damages are clearly established.

3.12 Where living resources can be enhanced by the placement on the sea-bed of material from removed installations or structures (e.g. to create an artificial reef), such material should be located well away from customary traffic lanes, taking into account these guidelines and standards and other relevant standards for the maintenance of maritime safety.

3.13 On or after 1 January 1998, no installation or structure should be placed on any continental shelf or in any exclusive economic zone unless the design and construction of the installation or structure is such that entire removal upon abandonment or permanent disuse would be feasible.

3.14 Unless otherwise stated, these standards should be applied to existing as well as future installations or structures.

* The phrase "party responsible" refers to any juridical or physical person identified by the coastal State for a purpose mentioned in the above paragraph 3.10.