REQUEST FOR PROVISIONAL MEASURES AND STATEMENT OF CASE SUBMITTED ON BEHALF OF IRELAND

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA

IN THE DISPUTE CONCERNING THE MOX PLANT, INTERNATIONAL MOVEMENTS OF RADIOACTIVE MATERIALS, AND THE PROTECTION OF THE MARINE ENVIRONMENT OF THE IRISH SEA

(IRELAND v. UNITED KINGDOM)

REQUEST FOR PROVISIONAL MEASURES

AND

STATEMENT OF CASE OF IRELAND

9 NOVEMBER 2001

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REQUEST FOR PROVISIONAL MEASURES

STATEMENT OF CASE OF IRELAND

1. On 25 October 2001 Ireland instituted arbitration proceedings against the United Kingdom, pursuant to Article 287 of the 1982 United Nations Convention on the Law of the Sea ("LOSC"), in respect of the dispute concerning the authorisation and operation of the MOX plant at Sellafield. Together with that document Ireland transmitted to the United Kingdom a Request for Provisional Measures. Those documents are set out at Annex 1. The proceedings will be heard by an arbitral tribunal constituted under LOSC Annex VII ("the Annex VII tribunal"). Ireland stated that if, within 14 days of the institution of the arbitration proceedings, the United Kingdom declined to take the measures requested by Ireland, namely to suspend the authorisation of the MOX plant and to stop international movements of radioactive materials associated with the MOX plant, then Ireland would submit the request for Provisional Measures to the International Tribunal for the Law of The Sea (pursuant to Article 290(5) of LOSC). As the United Kingdom has not taken the measures requested, on 9 November 2001 Ireland has submitted this Request for Provisional Measures to the International Tribunal, which sets forth the information necessary to satisfy the requirements of Article 89 of the Rules of the International Tribunal.

2. In accordance with Article 290 of the LOSC in order for the provisional measures requested to be prescribed, or such other provisional measures as the International Tribunal considers appropriate, the International Tribunal must be satisfied that:

(1) the provisional measures are required either to preserve Ireland's rights under LOSC or to prevent serious harm to the marine environment; and

(2) that *prima facie* the arbitral tribunal to be constituted would have jurisdiction over the dispute; and

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(3) that the urgency of the situation requires provisional measures to be prescribed.

Ireland submits that in this case each of the three conditions is satisfied and that the International Tribunal should prescribe the provisional measures which have been requested.

3. This Statement of Case is divided into 4 Parts. **Part 1** sets out the essential factual context relating to the decision of the United Kingdom to authorise the operation of a reprocessing plant to make Mixed Oxide (MOX) fuel from plutonium and uranium oxides, and international movements of radioactive materials associated with the operation of the MOX plant. **Part 2** identifies Ireland's rights under the LOSC that are affected by the operation of the MOX plant and international movements (the right to have the United Kingdom cooperate with it, the right to have the United Kingdom cause a proper environmental impact assessment on the MOX plant and associated transports to be prepared and published, and the right to ensure that the Irish Sea will not be subject to further radioactive pollution). These rights will be irrevocably harmed by the introduction of plutonium into the MOX plant on 20 December 2001. As will be explained, this is a practically irreversible act, and it will be referred to as the 'commissioning' of the MOX plant. **Part 3** addresses the jurisdictional basis of the arbitral tribunal, and describes how the tribunal has *prima facie* jurisdiction. **Part 4** describes the situation of urgency which now exists – in view of the intention of the operator to commission the MOX plant on 20 December 2001 – and explains why provisional measures are required to preserve Ireland's rights under LOSC and/or to prevent serious harm to the marine environment.

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PART 1:

FACTUAL BACKGROUND

4. This Part sets out the relevant factual background in relation to the present phase of these proceedings. It is presented without prejudice to the more detailed exposition which Ireland will rely upon at the merits phase before the arbitral tribunal. The facts are set out in some detail to demonstrate (a) the basis of Ireland's concerns about the proposed operation of the MOX plant and international movements of radioactive materials associated with the plant, and (b) the fact that these concerns are widely shared by other States.

(A) Geographic location, Ireland's interest, and nuclear activities taking place at Sellafield

5. The United Kingdom's decision to authorise the MOX plant at the Sellafield site will further intensify nuclear activities in the coast of the Irish Sea. The Sellafield site is located in Cumbria, in the North East of England, on the coast of the Irish Sea. The United Kingdom and Ireland lie on opposite sides of the Irish Sea (see Maps in Annex 2, p. 96 *et seq.*). The Sellafield site is some 112 miles from the Irish coast at its closest point (at Clogher Head). The formal boundary for fishery control purposes is the median line between Ireland and the United Kingdom. Both States claimed a 200 mile exclusive fishing zone in 1977. Ireland has a special concern for its marine environment, not least since a significant proportion of its economy relates to fisheries activities in the Irish Sea, including in close proximity to the Sellafield site and the areas in which international movements of plutonium and other radioactive substances would occur. Under the relevant EU legislation, Irish fishermen may and do fish within 6 miles of Sellafield. Along the Irish coastline, southwards from Northern Ireland lie around fifty significant communities, whether cities, towns or villages, comprising a regular coastal population of some 1.5 million people (out of a total population of 3.8 million), a level which increases significantly during holiday periods.

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6. The United Kingdom Government has recognised that Ireland has a "legitimate interest" in the activities carried out at Sellafield, in particular because of the potential impacts of radioactive emissions from the Sellafield facility into the Irish Sea. In 1997, following a planning inquiry at which Ireland presented its legal arguments, the United Kingdom declined to authorise an application by NIREX (a company partly owned by British Nuclear Fuels plc – 'BNFL' – the operators of the proposed MOX plant) to construct an experimental deep waste repository for the storage of nuclear waste under the Irish Sea. In taking that decision, the then Secretary of State (Mr John Gummer),

> "notes and agrees with the [Planning Inspector's conclusions (IR 3C.18 to 3C.23) regarding the concerns of the Irish Government …. and agrees that the people of Ireland have a legitimate interest in any proposal for a repository for radioactive waste near the Irish Sea coast. He is acutely aware of the Government's obligations to other states which are set out in various international obligations in respect of the sea and the environment more generally" (See Annex 2, p.37 *et seq.)*

7. BNFL is responsible for most of the activities carried out at the Sellafield site. BNFL is engaged in a range of commercial nuclear activities, including the reprocessing of spent nuclear power reactor fuels and the production of MOX fuel. It is expected to operate as a commercial entity. Sellafield is currently not a military site and it is not engaged in military activities. The reprocessing of nuclear waste fuel and discharges began at Sellafield (then called Windscale) in the 1950s. In 1993 a reprocessing facility – known as the MOX Demonstration Facility (MDF) – began producing small quantities (8 tonnes per annum) of Mixed Oxide (MOX) fuel for Light Water Reactors. In 1994 the Thermal Oxide Reprocessing Plant ("THORP") began operating, reprocessing spent nuclear fuel elements from Advanced Gas Cooled Reactors (AGR's) and Light Water Reactors (LWR's), separating plutonium and uranium from fission products. A third reprocessing facility – the B2O5 Plant – reprocesses spent fuel from Magnox reactors at Sellafield. The MOX plant which is the subject of this dispute is intended by BNFL to significantly increase MOX fuel production for use in Pressurised Water Reactors (PWR) and Boiling Water Reactors (BWR). It is intended to have a maximum output of 120 tonnes of heavy metal per year (tHM/y). No nuclear reactors in the United Kingdom currently use MOX and so at present all the MOX fuel produced at this facility will be exported. The process to

be used at the new MOX plant is unique and, Ireland respectfully submits, constitutes an experiment with unacceptable risks for Ireland.

8. The production and use of MOX fuel involves three stages with significant implications for the marine environment, which may be briefly summarized. First, spent reactor fuel elements, containing plutonium, unused uranium and fission products, are transported to Sellafield, mostly by sea. Second, the spent reactor fuel is reprocessed at THORP where uranium oxide, plutonium oxide and fission products are separated; the plutonium, in the form of plutonium oxide is then mixed with uranium oxide at the MOX plant to make MOX pellets which are then placed into new fuel rods. Third, rods are assembled into fuel assemblies for use in nuclear power reactors and the fuel assemblies are transported from Sellafield, again mostly by sea.

(B) Impacts of nuclear activities at Sellafield on the Irish Sea

9. Routine (intended) and accidental discharges of artificial radionuclides into the Irish Sea from Sellafield have occurred since the early 1950s. These discharges increased significantly in the 1970s, resulting in pollution that directly affects Ireland, including its waters.

10. There have been many independent scientific assessments of the state of the Irish Sea which have concluded that as a result of radioactive pollution from Sellafield, the Irish Sea is amongst the most radioactively polluted seas in the world. For example, the Report on "Possible Toxic Effects from the Nuclear Reprocessing Plants at Sellafield (UK) and Cap de La Hague (France)" ("STOA Report") was commissioned by the European Parliament's Directory General for Research, under the auspices of its Panel on Scientific and Technological Office Assessment (STOA). It was prepared by 10 independent experts and submitted to the European Parliament in August 2001. The General Conclusions set out in the Executive Summary (set out Annex 2, p. 50-9) include:

- "Marine discharges at Sellafield have led to significant concentrations of radionuclides in foodstuffs, sediments and biota";

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- "The deposition of plutonium within 20km of Sellafield attributable to aerial emissions has been estimated at 16-280 GBq (billion becquerels), that is two or three times plutonium fallout from all atmospheric nuclear weapons testing";
- "It has been estimated that over 40,000 TBq (trillion becquerels) of caesium-137, 113,000 TBq of beta emitters and 1600 TBq of alpha emitters have been discharged into the Irish Sea since the inception of reprocessing at Sellafield" (which means that "between 250 and 500 kilograms of plutonium from Sellafield is now absorbed on sediments on the bed of the Irish Sea");
- "In the UK, about 90% of nuclide emissions and discharges from the UK nuclear programme result from reprocessing activities" (at Sellafield).

According to the STOA Report the reprocessing of spent nuclear fuel at Sellafield and at La Hague leads to the largest man-made release of radioactivity into the environment anywhere in the world.[1]

11. The STOA Report confirms that nuclear reprocessing at Sellafield generates large inventories of radioactive waste. This gives rise to a significant risk of unplanned releases of radioactive materials, including in a liquid or gaseous form which would pose a significant threat to the Irish Sea. The greatest hazard is posed by the storage of high level radioactive waste (HLW) in liquid form. It is estimated that at least 1575 cubic metres of such waste is currently being stored at Sellafield in 21 tanks. Ireland considers that current state of knowledge makes it difficult to prepare accurate evaluations of risk arising from such storage. Nevertheless, as the STOA Report indicates, the consequences for human health and environment of an accidental atmospheric release from the high-level radioactive waste tanks at Sellafield would be far greater than the consequences of the Chernobyl accident in April 1986.

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1 Possible Toxic Effects from the Nuclear Reprocessing Plants at Sellafield (UK) and Cap de La Hague (France), WISE-Paris, August 2001, p. 9. (Annex 2, p. 50 et seq. contains the Executive summary of this report.)

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12. The impact on the marine environment of discharges from Sellafield is felt on the quality of the waters and on marine life. Lobsters and seaweeds, in particular, are known to concentrate radio-isotopes. The radioactivity can also contaminate beaches which would have deleterious impacts for human health.[2] Moreover, the mere threat of such contamination could have potentially serious impacts on tourism, which is a very significant part of Ireland's economy.

13. Ireland has expressed to the United Kingdom its concerns about the impact of activities at Sellafield since the 1950s. Ireland's concerns are shared by many other coastal States which also feel the impacts on the marine environment of discharges from Sellafield. Most recently, on 31 October 2001 the five member States of the Nordic Council called on the United Kingdom to stop isotope pollution from the Sellafield nuclear plant. Norway and other States have called on the United Kingdom to halt all radioactive discharges from Sellafield and close the THORP reprocessing plant.[3] Norway has called for emissions from BNFL's reprocessing facilities to be processed inland and not to be discharged into the Irish Sea;[4] and the Norwegian Minister of the Environment has written to her United Kingdom counterpart expressing strong regret on the decision that the MOX plant was justified, on the grounds that:

> "the new MOX plant will strengthen the commercial basis for reprocessing activities at Sellafield and most likely expand the volume and prolong the life span of these activities as well as the discharges and risks they entail. There will also inevitably be more shipments of MOX-fuel which represent a significant environmental and safety risk."[5]

(C) Regulatory compliance and safety issues at Sellafield

14. BNFL, which operates the various plants at Sellafield, has existed in its present form since 1971, when it was created out of the United Kingdom Atomic Energy

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2 See *The Interim Report of the Discharges Working Group*, BNFL National Stakeholders Dialogue, 28 February 2000. See also *supra*. no 1.

3 See Lexis, *M2 PRESSWIRE October 31, 2001* at Annex 2, p. 63.

4 See Lexis *Nordic Business Report October 30, 2001*, at Annex 2, p. 64.

5 See Norwegian letters of 18 October 2001 and 18 August 2001, at Annex 2, p. 33 et seq.

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Authority. In 1984 BNFL became a separate company, intended to operate on a commercial basis, although the United Kingdom's Secretary of State for Trade and Industry and the Treasury Solicitor hold all the shares in the company.

15. There is a poor record of safety and compliance with regulatory authorisations at Sellafield, with numerous examples of violations of regulatory authorisations that continue up to the present. In October 2001 it was reported that BNFL closed its two Sellafield reprocessing plants because it could not reduce production of liquid high-level radioactive waste (HLW) sufficiently to meet regulators' requirements.[6] In November 2001 a press report indicated the continuing adverse consequences of the 1957 accident at Windscale (Sellafield), with the Nuclear Installations Inspectorate reportedly halting the decommissioning of the Windscale reactor which caught fire in 1957 after an Inspector "'lost confidence, in the Atomic Energy Authority's ability to carry it out safely and legally".[7]

16. There are specific concerns relating to MOX. In September 1999 reports surfaced concerning the "falsification" of safety checks for MOX fuel destined for overseas customers at the Sellafield facility. Specifically, allegations were made that certain data relating to MOX fuel production at the MDF (see *supra*, para. 7) had been falsified.[8] An investigation launched by the United Kingdom Nuclear Installations Inspectorate (NII) of the Health and Safety Executive was highly critical of the running of the MDF plant and reported as follows:

> "It is clear that various individuals were engaged in falsification of important records but a systematic failure allowed it to happen. It has not been possible to establish the motive for this falsification, but the poor ergonomic design of this part of the plant and the tedium of the job [measuring MOX pellets] seem to have been contributory factors. The lack of adequate supervision has provided the opportunity." (NII Report, page iii)[9]

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6 See this and other Reports to this effect at Annex 2, p. 65 et seq.

7 See ibid.

8 Employees within BNFL's quality control process had bypassed elaborate checks on the dimensions of fuel pellets by using data sheets from previous samples – leading to some lots being passed as safe when the pellets had not actually been measured.

9 See Health and Safety Executive, Nuclear Installations Inspectorate, An investigation into the falsification of pellet diameter data in the MOX demonstration facility at the BNFL Sellafield site and the effect of this on the safety of MOX fuel in use, Report released 18 February 2000. See extracts at Annex 2, p. 60 et seq.

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The Report concluded:

> "The events at MDF which have been revealed in the course of this investigation could not have occurred had there been a proper safety culture within this plant. It is clear that some process workers falsified records of the diameter of fuel pellets taken for QA sampling. One example of falsification has been found dating back to 1996. There can be no excuse for process workers not following procedures and deliberately falsifying records to avoid doing a tedious task. These people need to be identified and disciplined. However, the management on the plant allowed this to happen, and since it had been going on for over three years, must share responsibility." (emphasis added)

17. The NII Report – which was published less than 2 years ago – stated that before the MDF was allowed to restart, BNFL would need to address all the recommendations made by the Inspectorate.[10] By 3 October 2001, when the Decision on "justification" was taken, not all the NII recommendations appeared to have been met. As a result of the adverse publicity surrounding the NII Report and press reports, the authorisation process of the MOX plant was slowed down. The falsification incident also eroded Japanese confidence in MOX fuel from Sellafield. Shortly after the incident it was reported the Japanese Government suspended imports of MOX fuel from BNFL.[11]

18. The United Kingdom Government has recently indicated a desire to dispense with its ownership of BNFL and to subject it to privatisation. In that context there has been considerable attention paid to BNFL's current financial situation. According to the Financial Times the company is "in balance sheet terms, worthless", with liabilities exceeding assets.[12] This is a matter of great concern, given the potential legal liability of BNFL for damage resulting from the operation of the MOX plant, international transports, or other activities at Sellafield

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10 These included assurances that the deficiencies found in the quality checking process were rectified, that the management of the plant was improved and plant operators were either replaced or retrained to bring the safety culture in the plant up to the standard NII required for a nuclear installation. *Ibid.*

11 The ADL Report suggests, on the basis of extensive but unidentified interviews with Japanese parties, that there will be no BNFL MOX deliveries to Japan until five conditions have been met, and in any case not until late 2004 (ADL Report, page 15). The ADL Report also accepts that 'the [falsification] incident has severely disrupted the Kansai MOX programme.' (Appendix, page 7)

12 See Lexis, Financial Times, 1 November 2001, Annex 2, p. 73.

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(D) The MOX authorisation process

19. Ireland considers that the process of authorisation of the MOX plant has been badly flawed, and inconsistent with the United Kingdom's obligations under the LOSC, because

(1) the impacts of the MOX plant on the marine environment have never been properly assessed;

(2) no account has been taken of the impacts of international movements of radioactive substances associated with the MOX plant;

(3) material information has been withheld from the public, including in Ireland; and

(4) the United Kingdom has failed in its duty to cooperate with Ireland.

20. The authorisation process began in the early 1990s. BNFL sought authorisation for the construction of a new MOX plant at Sellafield, for the commercial manufacture of mixed oxide fuel pellets to be used in nuclear reactors. The first stage of the authorisation was the preparation of an Environmental Statement, assessing the impacts of the MOX plant on the environment, in 1993.[13] On the basis of the 1993 Environmental Statement, which Ireland considers to be inadequate, the United Kingdom authorities approved the construction – but not the operation – of the MOX plant. The 1993 Environmental Statement has never been updated or revisited, despite longstanding and regularly repeated requests from Ireland.

21. Following completion of the plant's construction in 1996, BNFL sought to obtain the other necessary authorisations from the United Kingdom authorities, namely:

(a) authorisation for *uranium* processing, to test the operation of the MOX plant;

(b) authorisation for *plutonium* processing at the MOX plant, and

(c) authorisation for *full operation* of the plant.

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13 See Environment Statement, Annex 1, p. 33.

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22. Although closely related, these three stages have been treated separately by the United Kingdom authorities under the relevant domestic law. In order to obtain these authorisations BNFL had to satisfy the United Kingdom authorities that (1) the MOX plant would not release unacceptable levels of radioactive discharges *inter alia* into the marine environment, and (2) the MOX plant would be economically justified. No assessment of discharges, and no "economic justification" was required in respect of shipments of radioactive materials into and out of the United Kingdom of radioactive materials associated with the operation of the MOX plant. As far as Ireland is aware, shipments have never been subject to any environmental impact assessment requirement, and their impacts on the environment have never been assessed.

23. So far as discharges into the marine environment are concerned, prior to the construction of the MOX plant BNFL already held authorisations for the disposal of certain levels of gaseous and liquid waste from the Sellafield site. In November 1996 BNFL submitted applications to the United Kingdom authorities for variations to these authorisations, including variation in respect of proposed discharges from the MOX plant. On this application, the United Kingdom Environment Agency formed the view that the proposed gaseous, liquid and solid discharges from the new MOX facility fell within the existing Sellafield authorisations, so that no new license was necessary (see Environment Agency proposed decision document, paras. 3.1-3.4).

24. With regard to the "economic justification", European Community Law (Directive 80/836/EURATOM and Directive 96/269/EURATOM) required the United Kingdom to ensure that the MOX plant was "economically justified" before it could authorise its operation. This means that the economic benefits of the plant should be shown to be greater than its economic costs. The merits of this economic aspect of the dispute is not a matter for the Annex VII Tribunal or the ITLOS, but the handling of this aspect by the United Kingdom Government does bear directly upon this Request. Between April 1997 and August 2001, the United Kingdom authorities held five rounds of public consultations on the "economic justification" of the MOX plant. The first four rounds of consultations were based on a report prepared by an independent consultancy (the PA Report), and the fifth round of consultancy was based on a report prepared by another independent consultant (the ADL Report). The versions of the PA Report and the ADL Report which were placed in public circulation were heavily

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censored, and most of the material financial and quantitative information was removed. The United Kingdom cited the grounds of commercial confidentiality, as well as the need to excise information "on the ground that the publication of the information would cause unreasonable damage to…the economic case for the Sellafield MOX plant itself".[14] The information excluded from the published reports related *inter alia* to the volume of plutonium and uranium oxides to be reprocessed, the operational life of the plant, and the volume of international transports of radioactive material, including plutonium, associated with the plant). Ireland made submissions in each consultation round, and on each occasion asked to be provided with a complete copy of the relevant report. On each occasion the United Kingdom refused to accede to Ireland's request (see below at paras. 67-79).

25. Between 1994 and June 2001 Ireland made numerous and repeated written requests to be provided with the relevant reports (see below at paras. 67-79). However no substantive response was received to any of Ireland's numerous submissions or requests for information. In a letter of 23 December 1999, Ireland drew the United Kingdom's attention to the significant change in the circumstances in which the MOX plant was to be authorised, which necessitated a review of the authorisation.[15] On 15 June 2001, following efforts to resolve the dispute concerning the failure to provide information, Ireland initiated arbitration proceedings against the United Kingdom under the OSPAR Convention. Ireland maintains that the United Kingdoms refusal to make available a full copy of the PA Report (including the information relating to production volumes, international transportation and the costs of impacts on the marine environment) violated the United Kingdom's obligations under Article 9 of the OSPAR Convention (see Statement of Claims and Grounds which accompanied the Request, Annex 1, p. 93).[16] Ireland initiated the arbitration procedure to obtain information *inter alia* on production volumes, international transportation and environmental costs, in order to put itself in a position to be able to assess whether the

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14 See UK letter dated 5 September 2001, annex 2, p. 23.

15 Annex 1, p. 87 et seq.

16 That arbitration is pending. Ireland and the United Kingdom have respectively appointed Gavan Griffith SC and Lord Mustill as arbitrators, and on 22 October 2001 the parties agreed to appoint Professor Michael Reisman as the third arbitrator and Chairman of the tribunal. The parties have also agreed that the arbitration will be conducted under the auspices of the Permanent Court of Arbitration in The Hague.

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authorisation and operation of the MOX plant is compatible with the United Kingdom's international obligations. In June and August 2001 Ireland asked the United Kingdom to confirm that it would not authorise the operation of the MOX plant pending the conclusion of the OSPAR arbitration proceedings. After nearly three months of silence, on 13 September 2001 the United Kingdom declined to provide such a confirmation (Annex 2, p. 25 et.seq.). At that point Ireland understood that the United Kingdom was determined to press ahead with authorisation irrespective of Ireland's interests and rights. On 3 October 2001 the United Kingdom authorities adopted a decision that the MOX plant was economically justified, and that over the course of its life it would make a net operating profit of between £199 and £216 million.[17] That decision cleared the way for the operation of the MOX plant.

(E) The manufacture of MOX fuel and the related issues regarding transport

26. As summarised at paragraph 8 above, the production and use of Mixed Oxide (MOX) fuel involves three stages, each of which has significant implications for the marine environment.

Stage 1: Transport of Spent Reactor Fuel elements

27. With regard to the first, transportation, stage, the shipment of the spent nuclear fuel to Europe takes place on dedicated civil (i.e., non-military) freighters. Shipments to the United Kingdom have passed and will continue (if permitted) to pass in close proximity to Ireland. The former shipments of spent nuclear fuel from Japan to Europe under old contracts ended over a year ago, but any new contracts would re-establish shipments over a period of at least four years. Since the 1970s several thousands of tonnes of spent nuclear fuel have been shipped to Europe. Further shipments are likely to take place on vessels operated by Pacific Nuclear Transport Limited, the shipping

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17 In reaching that decision, based on the ADL Report, the United Kingdom excluded from the calculation all the capital costs of construction of the MOX plant. These amount to approximately £470 million. According to the United Kingdom's decision the capital costs will never be recouped by BNFL.

arm of BNFL, which operates two vessels – *Pacific Pintail* and *Teal*. In case of a shipping accident, spent reactor fuel elements contained in heavy casks could sink to the bottom of the ocean and eventually corrode, releasing high level radioactivity into the ocean. The effect of an accident, involving the loss of some or all of the cargo in and around Ireland, would be to seriously contaminate the ocean and probably also the land with highly radioactive materials. This could have devastating effects on fisheries and on human health and the environment.[18]

Stage 2: Manufacture of MOX fuel

28. The manufacture of MOX fuel at Sellafield involves significant risks for the Irish Sea. Such manufacture will inevitably lead to some discharges of radioactive substances into the marine environment, via direct discharges and through the atmosphere. Manufacture is also vulnerable to accidents; and the MOX plant can only serve to increase the attractiveness of subjecting Sellafield to terrorist attack.

29. The manufacturing process is relatively straightforward. Mixed Oxide (MOX) nuclear-reactor fuel is made from a mixture of depleted uranium dioxide (UO_2) and plutonium dioxide (PuO_2). It typically contains 3% to 10% plutonium-239 (Pu-239), the remainder being depleted uranium (U-238). The radioactivity in PuO_2 makes it a highly toxic material. If a person inhales less than a 100 micrograms of PuO_2 (which is too small a quantity to be visible to the human eye) into the lungs, it is highly probable that the person will develop lung cancer. If a few milligrams are ingested there is a high probability that the person will develop liver or bone cancer.

30. At the Sellafield MOX plant the uranium dioxide and plutonium dioxide will be mixed – by grinding, milling and blending- to produce a micronised, granulated powder.[19] During these processes a dry lubricant (zinc stearate) and a conditioner (an

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18 The International Atomic Energy Agency has stated that "if a large irradiated fuel package were to be lost on the continental shelf, some large exposures could result". Chairman's Report, IAEA, 4-6 November 1996.

19 The technology used by BNFL to produce MOX is known as the Short Binderless Route (SBR) process; it is a dry powder process developed by BNFL from its experience in developing and fabricating MOX fuel for fast breeder reactors. Other European MOX producers, use a different process, called Micronized Master Blend (MIMAS).

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agent to control porosity) are added. The granulated powder is then milled, pressed and sintered in an atmosphere of argon-hydrogen. This in turn produces a fused matrix of ceramic dioxide ($PuUO_2$). This sintered MOX is in the form of cylindrical pellets produced to dimensions specified by the customer. Pellets are stored on the Sellafield site until they are required for the production of reactor fuel rods.

31. The production of fuel rods – for the use in nuclear reactors outside the United Kingdom – will also take place at Sellafield. This involves placing the MOX pellets in a zirconium alloy sheath that is purged with helium. This forms a sealed fuel rod, which is 2 to 3 meters long.[20] The MOX fuel rods are then assembled; for a PWR the array is typically 17x17 rods comprising about 72000 pellets and for a BWR it is about 8x8 rods comprised of about 16,000 pellets. These fuel assemblies are transported to the reactor (see below), and inserted into the reactor core.

32. The production process involves the production of radioactive wastes in solid, liquid and gaseous forms (see below at paras. 108-111). A significant proportion of these liquid and gaseous wastes will be discharged into the Irish Sea or into the atmosphere, duly authorised by the United Kingdom (see below, paras 110-112). The operation of the MOX plant involves further dangers for the marine environment, in part because of the particular characteristics of the MOX fuel which distinguishes it from other fuels.

> First, the MOX plant is an automated plant relying extensively on a software-based system for control of the process.
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> Second, the production process involves the use of an advanced powder technology requiring the mixing, micronising, pressing, sintering and grinding of two actinide oxides. Experience in other powder processing industries, such as the pharmaceutical industry, indicates that that technologies which are dependent on powder technology are not very reliable, since small changes in parameters (such as humidity, binder concentration and particle size distribution)

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20 The fuel rod, purged with helium, is subjected to a helium leak test, monitored for loose and fixed contamination, tested for rogue pellets, checked for overall length and geometry, X-rayed, inspected for surface finish, loaded into a magazine and stored until required for the production of a fuel assembly.

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can affect the powder and result in changes such as poor mixing or powder jams.

Third, problems associated with powder technologies are exacerbated when, as in MOX fuel pellet fabrication, small batches need to be produced and variable formulations are pelletised.

Fourth, lapses in the quality of inspections[21] carried out by BNFL (for example in relation plutonium and uranium isotopic composition) may have extremely serious safety implications and may have consequences which are time consuming and costly to rectify.

Fifth, although MOX ceramic melts at a temperature of about 1,800 degrees Centigrade, surface oxidation occurs at the much lower temperature of about 250 degrees Centigrade if the fuel is exposed to air; at relatively low temperatures exposed MOX pellets give off respirable-sized particles following relatively short exposure periods.[22]

Stage 3: Transport of MOX fuel

33. The transportation of the MOX fuel prepared at Sellafield to Japan and possibly to other States is expected to take place largely on dedicated civil (i.e. non-military) freighters. The potential routes are set out at the map at Annex 2, p.99. The three possible routes for transport to and from Japan involve travel (i) via the Cape of Good Hope and the south-west Pacific, (ii) via Cape Horn, (iii) and through the Caribbean

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21 Several types of inspections are performed on MOX pellet characteristics. These include: chemical composition; visual inspection; linear dimensions (pellet diameter and length); geometric density; re-sinter behaviour; end squareness; dish and chamfer dimensions; surface roughness; plutonium homogeneity; and grain size. Fuel rods are inspected by visual inspection; x-ray inspection; weld metallography; helium leak detection; rod surface contamination; rod length; rod straightness; weld region diameter check; helium pressure test; end plug seal corrosion resistance; and wrong enrichment detection. Pellet samples are taken for physical and chemical analysis. Impurities, gas content, and solubility are measured. The oxide-to-metal ratio in a pellet is measured to obtain a measure of stoichiometry, which is important for the physical properties of the fuel and clad corrosion during irradiation. The total amount of Pu and U in the pellets is a crosscheck on stoichiometry and impurity levels.

22 For example, 1.87 per cent of the initial mass was rendered respirable when MOX fuel was exposed at 430 degrees Centigrade for 15 minutes, compared to 0.01 per cent at 800 degrees Centigrade.

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Sea and via the Panama Canal. Each shipment will pass close to Ireland. If the MOX plant proceeds to plan, then about 45 tonnes of plutonium reprocessed from previously contracted Japanese irradiated fuel will probably be incorporated into MOX fuel assemblies. Forty-five tonnes of plutonium could produce 900 tonnes of MOX fuel or 1800 typical LWR assemblies.[23] Assuming that the Japanese plutonium is returned to Japan in MOX fuel, it will involve a minimum of 60 shipments, if fully loaded, and many more (if partly loaded).

34. All ships are vulnerable to being involved in an accident. The probabilities of collision and fire on board the MOX carriers has been assessed for the "at sea" legs of the voyage, that is excluding the risk when the carrier ships are in the approaches to ports and berthing in harbours. Accidents involving ships include collisions, rammings, groundings, fire and explosions, foundering and miscellaneous causes including equipment and material failure and the result of hostile action. Such accidents occur in ports and approaches, at sea over continental shelves and slopes, and at deep ocean locations. The effect of an accident on board, depends on whether there is a fire and/or explosion on board involving the MOX fuel, and whether the ship sinks. A fierce fire could cause the plutonium in the MOX fuel to vaporise resulting in the release of a large number of respirable particles into the atmosphere and the marine environment. If these were to be blown over land it would amount to a serious hazard to the population. If the ship were to sink, any unrecovered fuel assemblies would eventually corrode and release MOX fuel into the marine environment.

35. The vessels are also vulnerable to terrorist attack, which could have the same result set out above. Moreover, terrorists could also seek to take MOX fuel from the ship and to separate the plutonium from the MOX fuel to produce a nuclear weapon.[24] This risk has been the subject of much attention at the IAEA and elsewhere since the events of 11 September 2001 (see below at paras. 39-43). The threat to transports of

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23 A fully loaded shipment could carry about 30 Assemblies. Each Assembly typically contains ½ tonne of MOX and therefore a full ship could contain about 30 tonnes of MOX or 1½ tonnes of Plutonium. It is pertinent to add that 35 Kilograms of PuO_2 is capable of making a nuclear explosive hence making each shipload enough to construct almost 40 nuclear weapons.

24 Terrorists could separate the PuO_2 from UO_2 in the MOX by straightforward chemical methods and then use the PuO_2 to produce a nuclear weapon or PuO_2 could be converted to Plutonium metal to be used in a more sophisticated nuclear explosive. See "Arguments against the Production and Use of Mixed Oxide (MOX) Nuclear Fuel, The submission of the Oxford Research Group to DETR's consultation on the Operation of SMP.

radioactive materials is as real as the threat to nuclear facilities. In 1999 the Chairman of the US House of Representatives International Relations Committee wrote to the then Secretary of State Madeline Albright expressing concern about MOX deliveries to Japan by ship. He stated that "with a top speed of 13 Knots [the ships] would not appear to have sufficient defensive and deterrent ability much less the manoeuvrability or speed of military or coast guard escort ships".[25] Similarly according to Janes, the recognised arms and naval authority, the ships are "capable of repelling only a light armed attack" and need to be protected by "at least one well-armed frigate."[26]

36. Besides Ireland, several other countries have already strongly protested the shipment of radioactive materials through waters over which they exercise sovereign rights or over the high seas. States in Latin America, led by Argentina and Chile, declared their strong opposition to the use of the Cape Horn route and have insisted that the ships do not enter their exclusive economic zone. Countries in the south-west Pacific, led by New Zealand, have done the same in relation to the Cape of Good Hope and the Pacific. However, as the Caribbean/Panama Canal route is the swiftest and cheapest, the Caribbean is considered especially suitable as a route. The use of this route has attracted widespread governmental protest. In March 1999 CARICOM Heads of Government expressed their strong opposition to the increasing frequency and volume of the hazardous material being shipped, in spite of the repeated protests by States in and bordering on the Caribbean Sea, and appealed to the Governments of France, Japan and the United Kingdom to desist from such transports through the Caribbean Sea.[27]

37. States in other parts of the world have also taken steps to address movements of radioactive shipments in and around their waters. These include expressions of concern and protest notes, and the banning of shipments through territorial waters and EEZs.[28]

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25 See letter dated February 11, 1999 at Annex 2 p. 78.

26 Jane's Information Group Foreign Report, May 13, 1999.

27 Several states have individually and through regional groupings protested nuclear transports. Protests of the Caribbean Community, the South Pacific Forum, the member states of of OPANAL and others are annexed as annex 2, p. 81 et seq.

28 The United Arab Emirates, Egypt, Haiti, Iran, Oman, the Philippines, and Saudi Arabia all require prior notification and authorisation for such shipments. Haiti has banned the shipment of materials likely to endanger the health of the country's population and to pollute the marine, air and land environment. Law of the Sea Bulletin No. 1 (July 1988), 13.

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In 1995, a number of States banned BNFL's *Pacific Pintail* from their EEZs.[29] Similarly, in 1997, a number of states banned BNFL's *Pacific Teal* from entering their EEZs.[30]

38. More recently, the Ministers for Foreign Affairs of the Rio Group, meeting in Santiago, Chile, on 27 March 2001, formally expressed their concern about the transit of radioactive materials and wastes along routes near their coasts, or along navigable watercourses of member countries, in view of the risks of damage involved and the harmful effects for the health of coastal populations and for the ecosystems of the marine and Antarctic environment. Those concerns, which were transmitted to the United Nations on 4 September 2001, related *inter alia* to security measures applicable to the transport of radioactive material and hazardous wastes, the need for guarantees on the non-pollution of the marine environment and the exchange of information on the routes selected, the need to communicate contingency plans in case of accidents, the provision of commitments to recover materials in the event of spills (or loss of materials through sinking or other causes) and to decontaminate affected areas, and establish mechanisms for liability in the event of damage.[31]

(F) The threat of terrorist acts against Sellafield and international movements associated with the MOX plant

39. Ireland has longstanding concerns about the threat which terrorism poses to nuclear materials and nuclear facilities. Since 11 September 2001 it has become clear that those threats are of two kinds: first, the desire of terrorist groups to obtain nuclear

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29 Brazil, Chile and Argentina (Reuters wire story, March 22, 1995), as did Kiribati. Fiji sent a diplomatic note to Japan to ensure the ship was kept out of its territorial waters.

30 Portugal and Malaysia banned the Pacific Teal from its waters (Reuters report, 15 July 1997). The Governments of Argentina, Brazil, Chile and Uruguay issued a joint declaration declaring their serious concerns with the risks of the transport of radioactive waste shipments in the region, their intention to adopt, in waters under their jurisdiction, measures recognized under international law in defence of the health of their populations and the marine environment, and the need to reinforce, in international bodies, the regulation of the transport of nuclear waste and spent nuclear fuel. (Joint Declaration about Radioactive Waste Transport, 17 January 1997). South Africa stated its opposition to the Pacific Teal entering it's EEZ. (Press Statement by Deputy Minister P. R. Mokaba, 31 January 1997). New Zealand issued formal statements seeking Japanese assurances that the vessel would not pass through New Zealand's EEZ.

31 See Note verbale dated 4 September 2001 from Chile to the UN (Annex 2, p. 87).

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materials (such as plutonium oxides and MOX fuel) with which to manufacture a nuclear weapon; and second, the emergence of nuclear facilities (such as the Sellafield site) as targets of direct attack by acts of terrorism.

40. Following the terrorist attacks of 11 September 2001 the spotlight has been placed firmly on threats of terrorist attack on nuclear facilities, including transports. Increased safety precautions have been taken in respect of nuclear facilities around the world, which are now recognised to be prime targets for terrorist attack.[32] Japan is reported to have ordered round-the-clock patrols of the waters near its nuclear plants. France is reported to have severely restricted access to its nuclear facilities and deployed surface to air missiles and fighter aircraft to protect its nuclear waste processing plant. Authorities in the Czech Republic are reported to have tightened airspace restrictions over nuclear power stations. In the United States and elsewhere steps have been taken to prevent transports, both national and international, of movements of radioactive materials and wastes. On 12 September 2001 the United States Energy Secretary suspended shipments of US Department of Energy nuclear materials and atomic waste, acknowledging that such shipments constitute real targets. The moratorium on movements was re-imposed following the US military action in Afghanistan and the threat of additional terrorism in the United States. Against this background the decision of the United Kingdom to authorise new nuclear activities and new international movements without detailed discussion with neighbouring States of the risks and projected responses is difficult to comprehend.

41. In late October 2001 the International Atomic Energy Agency convened a Special Session to address the need for stronger measures to prevent terrorists from obtaining access to nuclear or radioactive materials, and to protect nuclear facilities from becoming targets. The Director General of the IAEA has stated that the ruthlessness of the attacks had alerted the world to the potential of nuclear terrorism – making it "far more likely" that terrorists could target nuclear facilities, nuclear material and radioactive sources worldwide. He said:

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32 There are several press reports regarding the measures taken by various states. See for example Lexis, "U.S. confronts terror risks at nuclear plants" *Inter Press Service, October 5, 2001;* "INEEL transfers halted for indefinite period" *The Idaho Statesman, October 13, 2001* as well as several others.

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> "Because radiation knows no frontiers, States need to recognise that safety and security of nuclear material is a legitimate concern of all States. Countries must demonstrate, not only to their own populations, but to their neighbours and the world that strong security systems are in place. The willingness of terrorists to commit suicide to achieve their evil aims makes the nuclear terrorism threat far more likely than it was before September 11."[33] (emphasis added)

42. IAEA experts who have evaluated the risks of nuclear terrorism believe the primary risks involve either the theft or diversion of nuclear material from nuclear facilities, or physical attacks or acts of sabotage designed to cause uncontrolled releases of radioactivity into the surrounding environment. It has been widely reported that the extent of damage that could be caused by the intentional crash of a large, fully-fuelled jetliner into a nuclear reactor containment or other nuclear facility has never been analysed or taken into account in the design of nuclear facilities.[34] The Director General of the IAEA has stated:

> "[W]e realized that nuclear facilities – like dams, refineries, chemical production facilities or skyscrapers – have their vulnerabilities,.. there is no sanctuary anymore, no safety zone. [...] At a minimum, national assessments of security infrastructure for all types of nuclear and radioactive material should be required. Countries will have something to gain from allowing international assessments to demonstrate to the world that they are keeping their nuclear material secure."

43. Ireland has noted press reports stating that military planes were scrambled over the Sellafield site following credible reports of a threat to the site.[35] The United Kingdom has not provided Ireland with any information (confidentially or otherwise) as to any assessment it has made of the threat of terrorist attacks to the MOX plant or to international movements of radioactive materials, including plutonium, associated with the MOX plant. For understandable reasons no such information appears to have been made public. However, the United Kingdom has not consulted with Ireland – or sought to consult with Ireland – on the response measures it is taking to prevent

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33 The Director General's statement is annexed as Annex 2, p 89 et seq

34 According to US officials "Power plants and other nuclear facilities are designed to withstand extreme events such as hurricanes, tornadoes and earthquakes" but "they have not been designed to withstand aerial attacks" such as those on the World Trade Centre, See "U.S. confronts terror risks at nuclear plants" *Inter Press Service, October 5, 2001.*

35 See Lexis, The Express, November 2001, Annex 2, p. 95.

terrorist threats or to address the consequences of any terrorist attack which might lead to the release of radioactive substances into the environment.

(G) The history of the dispute between Ireland and the United Kingdom relating to the MOX plant and international movements

44. It may be helpful to summarise the history of the dispute between Ireland and the United Kingdom. Ireland has expressed its concerns about the proposed MOX plant since 1993. In 1994 it submitted its comments and objections on the 1993 Environmental Statement. Between 1997 and 2001 it submitted comments on five occasions in the various consultations which were held on the MOX plant's "economic justification", addressing also its environmental concerns (see *infra.*).

45. Ireland first raised its specific concerns with regard to the 1982 LOSC in its letter of 30 July 1999 (Annex 2, pp.). Subsequently, in its letter of 23 December 1999 Ireland again set out in detail its concerns about the MOX plant by reference to clearly identified provisions of the LOSC (Annex 2, p.). In both letters Ireland expressly reserved its rights under the LOSC. The United Kingdom did not respond at all to the first letter, and merely acknowledged receipt (three months later) of the second (see below at paras. 69-70). Since 1999 the United Kingdom has had ample time to address Ireland's concerns, both generally or specifically in relation to the LOSC. It has chosen not to do so.

46. Ireland's concerns in relation to the LOSC have been reiterated on several occasions. At a meeting held in London on 5 October 2001 Ireland notified the United Kingdom that, following the 3 October 2001 decision that the MOX plant was "economically justified" (removing the last substantial impediment to the commercial operation of the MOX plant), it considered the United Kingdom to have acted in violation of various provisions of the LOSC, as well as various other international instruments binding upon the United Kingdom. At that meeting Ireland informed the United Kingdom that it considered that a dispute existed between them in relation *inter alia* to the interpretation and application of various provisions of the LOSC.

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47. By letter dated 16 October 2001 Ireland reiterated its view that with the authorisation of the MOX plant on 3 October 2001 a dispute or disputes had arisen with the United Kingdom under LOSC and other international instruments binding upon the United Kingdom (Annex 1, p.30). The letter stated:

> "Ireland considers that the United Kingdom is in breach of its obligation to protect and preserve the marine environment and has failed to take all measures necessary to ensure that activities under its jurisdiction are so conducted as not to cause damage by pollution to Ireland (as required by Articles 192 to 194 [LOSC])."

48. The letter went on to identify various provisions of LOSC which Ireland considered had been violated by the United Kingdom. The letter also stated:

> "These international obligations become all the more significant in light of the terrorist attacks occurring in the United States on 11 September 2001. Ireland considers that it is imperative, in view of these attacks and renewed threats by terrorist groups, that further precautionary measures need to be taken to protect nuclear installations such as the MOX plant from attacks of this kind, as well as the proposed international transports by sea of radioactive materials to and from the MOX plant. Ireland is deeply concerned that possible terrorist attacks on the MOX plant and on sea transportations of radioactive material pose a very serious threat to Ireland and to its marine environment."

49. In that letter of 16 October 2001 Ireland called upon the United Kingdom "to suspend with immediate effect the authorisation of the MOX plant, and to take the necessary steps to halt with immediate effect all transportations of radioactive material in and around the Irish Sea to and from the MOX plant." Ireland also reserved its right to institute proceedings before appropriate international courts or tribunals without further notice. Ireland indicated its availability to proceed to an exchange of views as envisaged by Article 283 of then LOSC, notwithstanding the fact that the United Kingdom "appears strongly committed to the authorisation and early operation of the MOX plant".

50. The United Kingdom responded by letter dated 18 October 2001 from the Secretary of State at the UK Department for Environment, Food and Rural Affairs (DEFRA) (Annex 1, p. 257). The United Kingdom did not respond to Ireland's request that the authorisation of the MOX plant be suspended with immediate effect, merely noting that the United Kingdom "Environment Agency has concluded that the

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radiological detriments associated with the manufacturing of MOX fuel would be very small and that any effects on wildlife would be negligible". Once again the United Kingdom did not address the question of international movements of radioactive materials, including plutonium, associated with the MOX plant, or the increased threat of terrorist acts following events of 11 September 2001 and subsequently, or any of the points made by Ireland in relation to the specific provisions of LOSC identified in its letter of 16 October. The United Kingdom response simply stated: "[T]he UK is anxious to exchange views on the points you raise in your letter as soon as possible. In order to do so meaningfully we need to understand why the Irish Government considers the UK to be in breach of the provisions and principles identified in your letter".

51. By letter dated 23 October 2001, Ireland stated that it considered that no useful purpose could be served by any exchange of views unless the United Kingdom indicated a willingness to suspend authorisation or operation of the MOX plant (Annex 1, p. 258). By letter dated 24 October 2001 the United Kingdom declined to indicate any willingness to suspend authorisation or prevent operation of the MOX plant pending the resolution of the dispute with Ireland. (Annex 1, p. 260). With that letter it became clear that the dispute could not be settled by exchange of views leading to any negotiations.

52. Accordingly, by letter dated 25 October 2001 Ireland notified the United Kingdom that a situation of urgency now existed, that views had been exchanged between the parties, and that it reserved its right to initiate LOSC proceedings without further notice (Annex 1, p. 261). That evening Ireland initiated LOSC arbitration proceedings.

53. By a letter dated 30 October 2001 Ireland asked the Secretary of State at the UK Department for Environment, Food and Rural Affairs (DEFRA) when the MOX plant was likely to be authorised and operational.[36] No response was received. A reminder

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[36] See Annex 2, p.31.

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was sent on 6 November 2001.[37] As at the date of submission no response had been received. Ireland is still awaiting a response.

54. The MOX plant is not presently operating. However, it is expected to commence operations shortly. In the context of legal proceedings in the United Kingdom (in which Ireland is not involved), by letter dated 17 October 2001 BNFL indicated its firm intention to take "irreversible steps" on or around 23 November 2001. That letter stated:

> "Following the decision of the Secretaries of State on 3 October 2001, BNFL commenced with the consent of the NII, the initial stages of plutonium commissioning, which it expects to complete on or around 15 November 2001. These involve the transfer of sealed plutonium containing materials into SMP in order to calibrate radiation monitoring equipment and test shielding. These initial stages are part of a commissioning programme which will lead to the opening of a plutonium can scheduled to take place on or around 23 November 2001, allowing plutonium to be fed into the process as a prerequisite to the manufacture of MOX fuel. The cost and complexities involved in reversing the commissioning of SMP will be very significantly increased once the plutonium can has been opened and plutonium introduced into the plant process.
>
> It is of vital commercial importance to BNFL that the completion of the commissioning programme for SMP and the commencement of active operations is not delayed and it is BNFL's firm intention to proceed with the programme outlined above.". (Annex 2, p. 28).

On 6 November 2001 Ireland learnt that the date of 23 November 2001 had been pushed back to 20 December 2001 (see Annex 2, p.30). Ireland understands this to mean that on or around that date the United Kingdom will have provided all relevant authorisations and that the MOX plant will become operational notwithstanding the fact that the dispute over the plant will then be before the Annex VII tribunal (and related aspects of it also before the OSPAR tribunal).

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[37] See Annex 2, p. 32.

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PART 2:

THE VIOLATION OF IRELAND'S RIGHTS UNDER THE LOSC

55. In its Statement of Claim Ireland identified a number of provisions of the LOSC which it considers to have been violated by the United Kingdom. For the purposes of these Provisional Measures proceedings it is convenient to group those provisions around three sets of obligations which the United Kingdom owes to Ireland, and which give rise to rights which Ireland here invokes against the United Kingdom:

(1) the obligations of the United Kingdom to cooperate with Ireland in taking measures to protect and preserve the Irish Sea;

(2) the obligations of the United Kingdom to carry out a prior environmental assessment of the effects on the environment of the MOX plant and of international movements of radioactive materials associated with the operation of the plant;

(3) the obligations of the United Kingdom to protect the marine environment of the Irish Sea, including by taking all necessary measures to prevent, reduce and control further radioactive pollution of the Irish Sea.

Ireland's rights arise under the LOSC, and also under the rules of international law which are referred to by the LOSC or are otherwise relevant to the interpretation of the LOSC.

1. The obligation to cooperate

56. The United Kingdom's obligation to cooperate with Ireland in taking measures to protect and preserve the marine environment of the Irish Sea is set out in Articles 123 and 197 of LOSC, as well as under general international law. In its Statement of Claim Ireland asks the arbitral tribunal to order and declare that:

> "the United Kingdom has breached its obligations under Articles 123 and 197 of [LOSC] in relation to the authorisation of the MOX plant, and has failed to

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cooperate with Ireland in the protection of the marine environment of the Irish Sea *inter alia* by refusing to share information with Ireland and/or refusing to carry out a proper environmental assessment of the impacts on the marine environment of the MOX plant and associated activities and/or proceeding to authorise the operation of the MOX plant whilst proceedings relating to the settlement of a dispute on access to information were still pending"

57. Article 123 of LOSC is entitled "Cooperation of States bordering enclosed or semi-enclosed seas". It provides, in relevant part, that:

> "States bordering an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they shall endeavour, directly or through an appropriate regional organization: [...]
>
> (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment; [...]"

Article 197 of LOSC is entitled "Cooperation on a global or regional basis". It provides:

> "States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features."

58. The requirements of Article 123 are in addition to the more general obligations set forth in Article 197. Article 123 takes into account the geographic reality that the prevention of pollution of a semi-enclosed sea becomes all the more important because of the inability of the waters of a semi-enclosed sea effectively to disperse pollution, which tends to remain contained within those waters, giving rise to greater risk of harm to human health and environmental resources.

59. In the case of the Irish Sea – which is indisputably a "semi-enclosed sea" – the dangers posed by the increasing levels of radiation are clear. As set out above, the discharges from the Sellafield site have already led to a steady increase in levels of radiation (*supra*. para. 10). Even though discharges of certain radionuclides have stabilised, or even decreased, the levels of radioactivity have not diminished. This is due to the long-life of some of these radionuclides, and also to the physical difficulties

of dispersing those radioactive discharges into areas beyond the Irish Sea. Increased levels of radioactivity have been detected (Annex 2, p. 50).

60. For these reasons the geographical circumstances of the Irish Sea heighten the United Kingdom's obligation to cooperate with Ireland "in the exercise of its rights and in the performance of [its] duties under [LOSC]", in particular the obligation to "coordinate the implementation of [its] rights and duties [with Ireland] with respect to the protection and preservation of the marine environment".

61. The obligation to cooperate is not "un simple principe d'art politique ou un voeu pieux".[38] The obligation to cooperate imposes substantive obligations. As put by the arbitral tribunal in the *Lac Lanoux arbitration* (Spain v France):

> "France is entitled to exercise her rights; she cannot ignore Spain's interests. Spain is entitled to demand that her rights be respected and that her interests be taken intro consideration. As a matter of form, the upstream State has, procedurally, a right of initiative; it is not obliged to associate the downstream State in the elaboration of its schemes. If, in the course of discussions, the downstream State submits schemes to it, the upstream State must examine them, but it has the right to give preference to the solution contained in its own scheme provided that it takes into consideration in a reasonable manner the interests of the downstream State."[39] (Emphasis added)

62. For the International Court of Justice the obligation to cooperate entails that "[d]ue recognition must be given to the rights of both Parties", recognising that "[n]either right is an absolute one" and that States engaged in activities which may cause harm to the marine environment have "an obligation to take account of the rights of other States … and of the needs of conservation."[40] This formulation was applied in relation to the conservation of fisheries, but it applies equally to the prevention of radioactive pollution of the marine environment. It also means that neither State is entitled to insist "upon its own position without contemplating any modification of it".[41]

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38 P. Daillier and A. Pellet, Droit International Public, 6th ed, 1999, p. 432.

39 24 ILR 101, at 140 (1957).

40 Fisheries Jurisdiction (United Kingdom v Iceland), Merits, Judgment, ICJ Reps 1974, p. 3 at 31.

41 *North Sea Continental Shelf Cases*, ICJ Reps 1969, p. 47, para. 85.

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63. Ireland observes that this obligation exists also in customary international law, as reflected in Article 3 of the 1974 Charter of Economic Rights and Duties of States:

> "In the exploitation of natural resources shared by two or more countries each State must cooperate on the basis of a system of information and prior consultations in order to achieve optimum use of such resources without causing damage to the legitimate interest of others."[42]

Leading commentators have recognised that the obligation to cooperate requires regular exchanges of information, the notification of measures or activities which might have effects on other interested states, and – where real differences emerge between two States making use of a shared resource – the obligation to enter into consultations and negotiations.[43] At the very least the duty to cooperate involves the requirement that the neighbouring State's views and interests "are taken into consideration in a reasonable manner". The International Law Commission has recognised the "affirmation of a broad principle that States, even when undertaking acts that international law did not prohibit, had a duty to consider the interests of other States that might be affected".[44] If those views and interests are not considered to be sufficiently clear, then steps should be taken to obtain clarification before any decisive steps are taken. Those views and interests cannot simply be ignored.

64. For present purposes, the obligation of cooperation set forth in Article 123 and 197 of the LOSC means that the United Kingdom is obliged *inter alia* (a) to notify Ireland of the activities it is proposing to authorise, (b) to respond in a timely fashion to requests for information from Ireland, and (c) to take into account Ireland's rights and interests in the protection of the Irish Sea from further radioactive pollution and not merely insist upon the United Kingdom's own position. In relation to each of these requirements the United Kingdom has failed in its duty to cooperate.

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42 GA Res 3281 (XXIX) of 12 December 1974.

43 See P-M Dupuy, *Droit International Public*, 2nd ed., 1994, p. 493.

44 Ybk ILC (1980), ii, pt 2, p 159.

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Notification

65. The United Kingdom's obligation to cooperate means that Ireland is entitled to be notified about the essential details concerning the operation of the MOX plant and the international movements of radioactive materials associated with the operation of the plant, without Ireland having to request each piece of that information. Beyond the very limited information set forth in the 1993 Environmental Statement (on which see below at paras. 86 *et seq.*) there has been no such notification by the United Kingdom.

66. To this day Ireland has not been notified by the United Kingdom as to the proposed start date for the operation of the MOX plant, of the number of years over which the plant is to operate, of the volume of plutonium and uranium oxides which are to be reprocessed into MOX pellets, or the number of international transports of spent nuclear fuel and of MOX fuel assemblies which will be entering the Irish Sea in close proximity to Ireland. The United Kingdom has not notified Ireland of any emergency response plans in relation to accidents at the MOX plant or in relation to international movements of radioactive materials associated with the plant. Further, following the events of 11 September 2001, the United Kingdom has not notified Ireland of any additional security measures that have been taken or are proposed in relation to the Sellafield site generally or the proposed MOX plant and international movements of radioactive materials associated therewith in particular.

Responding to Ireland's requests

67. In addition to the United Kingdom's obligation on its own initiative to notify Ireland of the plans for the MOX plant, the United Kingdom has a further obligation to respond in a timely and substantive fashion to Ireland's reasonable requests for further assistance and information on the proposed MOX plant and international movements of radioactive materials associated with its operation. The record shows that Ireland has repeatedly transmitted such requests for assistance and information over the past five years. In the great majority of cases the United Kingdom has simply failed to respond at all, or has responded very late. When the United Kingdom has responded, no substantive material or information has been provided. Indeed, the record shows

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compellingly that on no occasion has the United Kingdom responded substantively to any request put by Ireland. The United Kingdom has chosen to ignore every single Irish request. This is material not only in relation to the United Kingdom's duty to cooperate, but also in relation to its obligation to take into account Ireland's rights and interests in the protection of the Irish Sea (on which see further below at para. 80 *et seq.*).

68. The Provisional Measures phase of these proceedings is not the place for a comprehensive demonstrations of the United Kingdom's failings in this regard. For present purposes it is sufficient to illustrate the extent of the United Kingdom's failure by reference to some of the correspondence.

69. Ireland's letter of 23 December 1999 provides a clear example. In that letter (see Annex 1, p. 87) Ireland's request concerned three matters. The first concerned the consequences of the scandal concerning the falsification of data relating to MOX fuel exported to Japan, which came to light in the autumn of 1999, and the consequent suspension by Japan of MOX imports from Sellafield. In that regard Ireland sought the United Kingdom's confirmation that–

> "(1) no decision [on the MOX plant] will be taken on economic justification so long as the Government of Japan has not indicated its agreement to the utilization of MOX fuel, and (2) that the process of consultation will be extended to permit consideration of the economic viability of the proposed MOX plant in the absence of any (or any significant) Japanese contracts."

70. The United Kingdom's response arrived on 9 March 2000. It states that when a final decision regarding the full operation of the plant is taken it will set out the reasons in full, and this will be sent to Ireland. Ireland's second request in the letter of 23 December 1999 related to the inadequacy of the 1993 Environmental Statement (see below at para. 87). Here, Ireland

> "calls upon the United Kingdom to carry out a new environmental impact assessment procedure taking into account the requirements of the 1982 UNCLOS, the 1991 Espoo Convention, the 1992 OSPAR Convention, Directive 97/11/EC, and the 1998 Sintra Ministerial Declaration. The Irish Government also seeks confirmation that the operation of the proposed MOX plant will not be authorized before such a revised environmental impact assessment procedure has been carried out."

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71. The United Kingdom's letter of 9 March 2000 does not respond to this point at all. The United Kingdom has not responded since.

72. Ireland's third request in its letter of 23 December 1999 concerned the impact of the discharges from the MOX plant into the marine environment, having regard to the obligation which the United Kingdom accepted in 1998 to reduce concentration of artificial radioactive substances in the Irish Sea to "close to zero" by 2020, as well as the precautionary principle. In this regard Ireland

> "seeks the views of the UK Government as to the basis upon which the proposed authorization of discharges from the MOX plant into the marine environment would "meet all…international standards and legal requirements", as the Environment Agency claims. The Irish Government further seeks confirmation that no authorization will be granted or put into effect pending resolution of these matters."

73. The United Kingdom's letter of 9 March 2000, purportedly in response, does not address Ireland's request. It is clear from this exchange that the United Kingdom has not responded to any of Ireland's enquiries, and cannot be considered to have taken into account Ireland's interests.

74. The second example of the United Kingdom's failure to fulfil its obligations concerns Ireland's request for information under Article 9 of the OSPAR proceedings, resulting in the invocation by Ireland of the OSPAR dispute settlement procedure and the constitution of an arbitral tribunal to resolve the dispute. As described in its Statement of Claim in that Case (Annex 1, p. 93), Ireland requested information relating *inter alia* to the proposed start date for the operation of the MOX plant, the number of years over which the plant is to operate, the volume of plutonium and uranium oxides which are to be reprocessed into MOX pellets, and the number of international transports of spent nuclear fuel and of MOX fuel assemblies which will be entering the Irish Sea in close proximity to Ireland (as set out in the PA Report). Ireland reiterated that request on several occasions. Each time the request was met with silence or a refusal to give the information, without any reasons beyond a general and unparticularised claim to "commercial confidentiality" (see Annex 1, p. 93 *et seq.*). Ireland has also been forced to remind the United Kingdom about requests for information which have been made but not responded to. For example, in the letter of

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30 July 1999 Ireland request a full copy of the PA Report. Some five months later no response had been received from the United Kingdom. A further request was made by letter of 18 November 1999 (Annex 2, p. 9). A response finally came on 17 December 1999, refusing to provide the information. The reasoning was limited to a statement that "[d]isclosure of this information could cause BNFL unacceptable commercial harm" (Annex 2, p 10). On 21 May 2001 the United Kingdom Environment Minister responded to a further request: "I am still considering this but I hope to be able to provide you with a substantive reply shortly" (Annex 2, p. 18). No such reply was forthcoming until after Ireland had commenced arbitration proceedings. Once again, the exchange of letters demonstrates the reluctance of the United Kingdom to engage with Ireland, amounting in Ireland's view to a failure to cooperate.

75. The third example of non-cooperation on which Ireland relies for present purposes concerns the United Kingdom's failure to accede to Ireland's request that the United Kingdom not authorise the MOX plant pending the outcome of the OSPAR arbitration proceedings. It will be recalled that one purpose of those proceedings is to obtain basic information (see above at para. 74) which will allow Ireland to assess whether the environmental consequences of the operation of the MOX plant have been properly considered in accordance with the United Kingdom's obligations under the LOSC. Here, Ireland's request was made in its Statement of Claim of 15 June 2001 and the covering letter. No response was received. Ireland sent a reminder on 7 August 2001. On 13 September 2001 the United Kingdom responded, declining to accede to Ireland's request.

76. A fourth example of the difficulties faced by Ireland in its relations with the United Kingdom is reflected in the most recent correspondence, in particular the United Kingdom's claim that as at 24 October 2001 there did not exist a basis for a "meaningful" exchange of views with Ireland, since Ireland's concerns were unsupported by "reasoning". It will be clear from paragraph 45 above – and paragraphs 87-89 below relating to the inadequacy of the Environmental Statement – that Ireland has set out in detail its concerns (and the reasoning supporting those concerns) relating to the non-compliance by the United Kingdom with its substantive obligations under the LOSC. Those were set out in the letter of 23 December 1999, and they have been reiterated subsequently, most recently at the meeting held at the Foreign and

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Commonwealth Office on 5 October 2001 and in Ireland's letter to the United Kingdom dated 16 October 2001. By letters dated 18 and 24 October 2001 the United Kingdom claims that it does not "understand why the Irish Government considers the UK to be in breach of the [LOSC] provisions and principles, and that the "list of alleged breaches" put forward by Ireland does not "throw any light on the reasoning of the Irish Government". Given the history of the dispute, in particular over the past three years, the claim is both surprising and without any merit. The earlier correspondence (including Ireland's letters of 30 July 1999 and 23 December 1999) goes into considerable detail in explaining Ireland's concerns. The United Kingdom has chosen to ignore those letters.

77. Finally, in relation to this aspect of the duty to cooperate, Ireland notes that even now it has difficulty in obtaining full information from the United Kingdom. In her letter dated 24 October 2001 the United Kingdom Secretary of State (at DEFRA) writes:

> "In your letter of 16 October 2001 you said that the Irish Government notified the United Kingdom "that following the decision of the United Kingdom to proceed with the authorisation of the MOX plant, it considers the United Kingdom to have acted in violation of provisions of various international instruments.." It is in fact the case that the authorisation procedure for the MOX plant has not yet been completed." (emphasis added)

78. The clear implication is that the view adopted by Ireland is premature and that it would be inappropriate for Ireland to proceed now to LOSC dispute settlement. In fact, a letter dated 17 October 2001 written by BNFL to Friends of the Earth in the context of English judicial review proceedings, and copied to the Head of Civil Litigation at DEFRA, had stated that:

> "Following the decision of the Secretaries of State on 3 October 2001, BNFL commenced with the consent of the NII, the initial stages of plutonium commissioning, which it expects to complete on or around 15 November 2001. These involve the transfer of sealed plutonium containing materials into SMP in order to calibrate radiation monitoring equipment and test shielding. These initial stages are part of a commissioning programme which will lead to the opening of a plutonium can scheduled to take place on or around 23 November 2001, allowing plutonium to be fed into the process as a prerequisite to the manufacture of MOX fuel. The cost and complexities involved in reversing the commissioning of SMP will be very significantly

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increased once the plutonium can has been opened and plutonium introduced into the plant process.

It is of vital commercial importance to BNFL that the completion of the commissioning programme for SMP and the commencement of active operations is not delayed and it is BNFL's firm intention to proceed with the programme outlined above. For this reason alone, it would seem to be in the interests of all parties to have the judicial Review proceedings heard before 23 November 2001."

79. It is difficult to see how the United Kingdom Secretary of State's letter of 24 October 2001 can be regarded as a fulfilment of the United Kingdom's duty to cooperate, as required by Articles 123 and 197 of the LOSC. On 30 October 2001 Ireland wrote to the UK Secretary of State at DEFRA seeking clarification from her as to the date upon which she expected the authorization procedure for the MOX plant to be completed. By the date of this Statement, notwithstanding the urgency, she had not replied, despite a reminder sent on 5 November 2001.

The United Kingdom has failed to take into account Ireland's rights and interests in the protection of the Irish Sea

80. The United Kingdom's obligation to cooperate with Ireland includes the responsibility to take into account Ireland's rights and interest in the protection of the Irish Sea. In April 1997, in the context of its decision not to authorise the construction of a deep waste repository under the Irish Sea (see *supra*, para. 6), the United Kingdom expressly recognised Ireland's legitimate interest in the protection of the Irish Sea from sources of radioactive pollution arising in the United Kingdom. Recognising that interest means, pursuant to Articles 123 and 197 of LOSC, taking Ireland's views into account in deciding whether to authorise the MOX plant, and if so under what conditions.

81. As set out above, the United Kingdom has systematically chosen not to respond to Ireland's concerns since 1994. It appears to have ignored them entirely. It now says that it does not even understand Ireland's concerns (see letter of 18 October 2001). If that is indeed the case, the United Kingdom plainly cannot claim to have taken into

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account Ireland's rights and interests. This failure constitutes a further violation of the United Kingdom's duty to cooperate.

2. The obligation to carry out an environmental assessment

82. Ireland submits that the United Kingdom has violated LOSC Article 206 ("Assessment of potential effects of activities"). This provides:

> "When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205."

83. In its Statement of Claim Ireland asks the arbitral tribunal to declare that

> "the United Kingdom has breached its obligations under Article 206 of [LOSC] in relation to the authorisation of the MOX plant, including by
>
> (a) failing, by its 1993 Environmental Statement, properly and fully to assess the potential effects of the operation of the MOX plant on the marine environment of the Irish Sea; and/or
>
> (b) failing, since the publication of its 1993 Environmental Statement, to assess the potential effects of the operation of the MOX plant on the marine environment by reference to the factual and legal developments which have arisen since 1993, and in particular since 1998; and/or
>
> (c) failing to assess the potential effects on the marine environment of the Irish Sea of international movements of radioactive materials to be transported to and from the MOX plant; and/or
>
> (d) failing to assess the risk of potential effects on the marine environment of the Irish Sea arising from terrorist act or acts on the MOX plant and/or on international movements of radioactive material to and from the MOX plant."

84. The proposed MOX plant and international movements of radioactive materials associated with the operation of the MOX plant are plainly activities within the jurisdiction and control of the United Kingdom which "may cause substantial pollution of or significant and harmful changes to the marine environment" of the Irish Sea. Ireland considers that the United Kingdom is in violation of this Article 206 by reason

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of its having failed to carry out an adequate environment assessment of the MOX plant, and for having failed entirely to carry out any assessment of the associated international movements of radioactive materials.

85. The proposed MOX plant was the subject of an environmental impact assessment procedure in 1993. A copy of the Environmental Statement prepared by BNFL as part of that process is set forth at Annex 1, p. 33. In 1994 Ireland communicated to the United Kingdom its views as to the inadequacies of the Environmental Statement, summarising its position as follows:

> "the Environmental Statement does not provide sufficient and adequate information to enable the effects on the environment of the MOX plant to be assessed and that it does not comply with the relevant requirements of the EC Directive on Environmental Impact Assessment [Directive 85/337/EEC]": *Submission to Copeland Borough Council on Proposed Sellafield Mixed Oxide (MOX) Plant*, 1994, page 10.

86. In that submission Ireland sets out its concerns. It notes in particular the complete failure to assess the consequences of transport accidents or of accidents to the proposed MOX plant, or the impact of exposures of members of the public, either near the site or in the nearest Member State, Ireland. It notes also the failure to provide any information about the radiation doses which will be received by members of the public in Ireland during the normal operation of the MOX plant. Other important concerns related inter alia to: the failure to take proper account of the area's topography, geology and seismology; the failure to provide information on demography and meteorology; failure to provide information on the relationship between the plant and the nearby marine environment of the Irish Sea; the failure to consider the effect of further radioactive discharges on the ecology of the marine environment, including marine invertebrate fauna, algae, plankton, and commercial and sport fish; the failure to provide data on the nature and quantities of materials to be used in the production processes; the failure to provide complete information on the nature and quantities of the effluents and wastes to be generated by the MOX plant, or the methods of processing them; the absence of complete information on decommissioning and its effects; and the failure to provide information on the environmental monitoring programmes to be undertaken by BNFL.

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87. These concerns were taken up again, and in further detail, in Ireland's letter of 23 December 1999 to the UK Secretary of State for the Department of the Environment, Transport and the Regions. By this time more than five years had passed since the Environmental Statement had been published, and no supplement had been prepared to update it. Ireland wrote to the United Kingdom reiterating its earlier concerns (in particular in relation to the inadequate assessment of impact of discharges into the marine environment) and setting forth its view that the environmental assessment of the plant was further deficient by reason of the fact that it failed to take any account of the material developments in English, EC and international law which had occurred since 1993 for the protection of the marine environment of the Irish Sea. The legal developments, which had all come into effect for the United Kingdom since the 1993 Environmental Statement was published and approved, included:

- the 1982 LOSC (ratified by Ireland on 21 June 1996 and acceded to by the United Kingdom on 25 July 1997);
- the 1992 OSPAR Convention (in force for the United Kingdom and Ireland on 25 March 1998);
- the 1998 Sintra Ministerial Statement agreeing "to prevent pollution of the maritime area from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances"; and
- the amendments to EEC Directive 85/337 (on environmental impact assessment), introduced by Directive 97/11/EC.

88. In its letter of 23 December 1999 Ireland expressly identified further international legal obligations which had to be taken into account in authorising the MOX plant and international movements of radioactive materials, including:

- The obligation to protect and preserve the marine environment and to prevent pollution of the marine environment: 1982 LOSC Arts. 192 to 194;

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- The obligation to apply the precautionary principle: see 1992 OSPAR Convention, Art 2(2)(a);
- The obligation to take all possible steps to prevent and eliminate pollution from land based sources in accordance with Annex 1 of the 1992 OSPAR Convention, making use *inter alia* of 'best available techniques' and 'best environmental practice': see 1982 LOSC Art. 207, and 1992 OSPAR Convention, Art 3;
- The obligation to reduce concentrations in the environment to 'close to zero' for artificial radioactive substances, by the year 2020; see the 1998 Sintra Ministerial Statement;
- The obligation to ensure that national authorities make available information on activities or measures adversely affecting or likely to affect the state of the maritime area: see 1992 OSPAR Convention, Art 9(1); and
- The obligation to prepare an environmental impact assessment prior to a decision to authorise a proposed activity: see 1982 LOSC Art 206.

89. In its letter of 23 December 1999 Ireland stated:

"The EIS which was prepared in 1993 does not clearly identify the discharges of radioactive material into the marine environment or assess their impact. It fails to consider the alternatives to the proposed activity, and it does not indicate predictive methods and assumptions. It does not provide any information as to the international movements of radioactive materials associated with the operation of the plant. Moreover, the EIS has been prepared on the assumption that discharges of radioactive material from the MOX operations would be internationally lawful and without taking into account the need to reduce concentrations in the environment to "close to zero" by the year 2020. Further, the EIS is premised on operations which are clearly not precautionary in character, assuming as they do the discharge of new radioactive materials into the marine environment. Finally, the consultation procedure on the economic justification of the plant has been carried out on the basis of inadequate information having been made available to the public. Despite requests from the Irish Government for such information [...] the UK Government has refused to disclose this information to the Irish Government.

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> In light of the above points, a decision to authorize the operation of the MOX plant would be based upon an EIS which was incompatible with the UK obligations under the 1982 [LOSC], the 1991 Espoo Convention and Directive 97/11/EC and consequently be in violation of the requirements of those instruments. Such authorization would violate the obligations of the United Kingdom to apply a precautionary approach and to *inter alia* protect and preserve the marine environment, to take all possible steps to prevent and eliminate pollution from land based sources, and to reduce concentrations in the environment to "close to zero" for artificial radioactive substances, by the year 2020 (as required by the 1982 UNCLOS, 1992 OSPAR Convention and the 1998 Sintra Ministerial Declaration)."

90. As has been noted above, the United Kingdom took more than ten weeks to respond to the letter of 23 December 1999 (see United Kingdom letter of 9 March 2000). That response from the UK Minister for the Environment apologised for the delay in responding and stated:

> "Whilst I am, of course, grateful to you for your further views and comments, I am sure that you understand why I cannot address these points in detail while we are still in the process of coming to a final decision on the full operation of the plant. I am also sure that you will appreciate that the implications of the data falsification incident at the Sellafield MOX Demonstration Facility will have some bearing on our decisions.
>
> Whatever our final decision, we do plan to publish a decision document which will explain our reasons in full. I will ensure that you are sent a copy immediately it is published."

91. The United Kingdom did not respond further to Ireland's concerns. The decision document on the MOX plant and international movements was finally published on 3 October 2001. It made no mention whatsoever of the concerns raised by Ireland in relation to the LOSC.

92. In these circumstances the United Kingdom cannot claim that Ireland has not set out its concerns in detail. The United Kingdom has had more than two years to respond to them and to address them. It has not done so. The MOX plant has not been subject to any further environmental assessment to consider whether its operation would meet the standards of the instruments mentioned above. The international movements of radioactive materials have not been subject to any environmental assessment whatsoever. In Ireland's view these omissions fail to respect Ireland's rights under Article 206 of LOSC, to the requirements of which the United Kingdom was expressly

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directed to by Ireland's letter of 23 December 1999. Ireland also directed the United Kingdom to a 1997 judgement of the International Court of Justice which underscored the importance of environmental assessment and the need to take into account new standards of environmental protection. At paragraph 140 of the Case Concerning the Gabcikovo-Nagymaros Project (Hungary/Slovakia) the International Court stated:

> "In order to evaluate the environmental risks, current standards must be taken into consideration. [...] The Court is mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.
>
> Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments in the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past." (emphasis added)

The Court concluded that, "[f]or the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment of the operation of the Gabcikovo power plant. [...]" (emphasis added)

93. Ireland respectfully endorses the approach taken by the International Court, which makes it clear that new projects must be evaluated in the light of the standards in force at the time of proposed authorisation. Any approach other than the evolutionary one favoured by the ICJ would retard progress in the field of environmental protection, giving States an incentive to rush projects to completion before the formal adoption of more demanding legal norms, and allowing outmoded and harmful projects to continue in defiance of new standards. The approach taken by the United Kingdom – authorising in 2001 the MOX plant by reference to standards of 1993 – would not be consistent with the duty to protect and preserve the marine environment of the Irish Sea.

94. In conclusion, Ireland has a right under Article 206 of the LOSC to expect the United Kingdom to subject the MOX plant to an environmental assessment which takes into account the environmental standards pertaining at the time of any decision by the UK authorities. Ireland has a further right to expect international movements of radioactive materials associated with the operation of the plant to be subjected to an environmental assessment. These rights will be irrevocably lost if the United Kingdom now proceeds to authorise the plant.

3. *The obligations of the United Kingdom to protect the marine environment of the Irish Sea, including by taking all necessary measures to prevent, reduce and control further radioactive pollution of the Irish Sea*

Introduction

95. Ireland submits that the United Kingdom has violated (a) Articles 192 and 193, and (b) Article 194, and (c) Article 207, and (d) Articles 211 and 213 of LOSC. Ireland considers that each of these four heads give rise to separate causes of action. For the purposes of these provisional measures proceedings, and without prejudice to the approach to be taken at the merits phase, Ireland considers that it is convenient to treat the various causes of action collectively.

96. In interpreting and applying these provisions of LOSC Ireland also relies on Article 293 of the LOSC, which provides that a court or tribunal having jurisdiction under Part XV of the LOSC "shall apply [LOSC] and other rules of international law not incompatible with [the LOSC]". In relation to this case, including at the provisional measures phase, two principles and rules of international law inform Ireland's rights under LOSC, namely (a) the precautionary principle, and (b) the obligation to reduce concentrations of artificial radioactive substances to 'close to zero' by the year 2020.

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The Precautionary Principle

97. Ireland submits that the precautionary principle is now recognised as a rule of customary international law, that it is binding upon Ireland and the United Kingdom, and that it is of singular importance for the provisional measures phase of this case. The precautionary principle is a free-standing obligation which binds the United Kingdom but which it has failed to apply, and it is a principle applicable to the interpretation of each and every provision of LOSC upon which Ireland relies, including the interpretation and application of "urgency" under Article 290(5) LOSC see further below at para. 148).

98. The precautionary principle is well-established in its application to the protection of the marine environment. The preamble to the 1984 Ministerial Declaration of the International Conference on the Protection of the North Sea (which includes the Irish Sea), in which Ireland and the United Kingdom participated, referred to the consciousness that States "must not wait for proof of harmful effects before taking action", since damage to the marine environment can be irreversible or remedial only at considerable expense and over long periods.[45] The Ministerial Declaration of the Second North Sea Conference (1987) accepted that "in order to protect the North Sea from possibly damaging effects of the most dangerous substances, a precautionary approach is necessary".[46] At the Third North Sea Conference (1990) Ministers pledged to continue to apply the precautionary principle.[47] In 1992 more than 175 States at the United Nations Conference on Environment and Development (UNCED) confirmed their support for the precautionary principle, adopting a working definition in Principle 15 of the Rio Declaration on Environment and Development. This provides:

> "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

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45 Bremen, 1 November 1984.

46 London, 25 November 1987. See also PARCOM Recommendation 89/1 (1989, supporting the "principle of precautionary action".

47 The Hague, 8 March 1990.

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99. These States also expressly confirmed that the precautionary approach was applicable in terms to nuclear activities carried out in proximity to the marine environment. Paragraph 22.5 of Agenda provides:

> "States, in cooperation with relevant international organisations, where appropriate, should: [...]
>
> c) Not promote or allow the storage or disposal of high-level, intermediate level and low-level radioactive wastes near the marine environment unless they determine that scientific evidence, consistent with the applicable internationally agreed principles and guidelines, shows that such storage or disposal poses no unacceptable risk to people and the marine environment or does not interfere with other legitimate uses of the sea, making, in the process of consideration, appropriate use of the concept of the precautionary approach;"

100. In the Southern Bluefin Tuna case the International Tribunal recognised the need for the parties in those cases to "act with prudence and caution" to ensure that effective conservation measures are taken and to prevent serious harm to stocks of Southern Bluefin tuna (para. 77). Ireland respectfully submits that the requirements of "prudence and caution" are even more relevant for decisions relating to the irreversible discharge of radioactive substances into the marine environment, whether direct or indirect, intended or unintentional.

101. Precaution, prudence and caution apply both to the operation of the MOX plant and to the international movements of radioactive materials associated with it. The harmful effects of radioactive pollution on the marine environment are not in doubt. Applied to the authorisation of the MOX plant and international movements of radioactive materials associated with the plant, the precautionary principle means that the United Kingdom must apply caution, and take preventive measures even where there is no conclusive evidence of a causal relationship between the inputs and the effects. Ireland considers that the precautionary principle becomes all the more important following the events of 11 September 2001 and recognition by the IAEA and other regulatory bodies of the significantly increased risks of terrorist attacks on nuclear sites and on international movements of radioactive materials (see *supra*, paras. 39-43). Ireland submits that the precautionary principle also informs the conditions under which the International Tribunal should approach the question of urgency and the *prima facie* merits of Ireland's case.

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The obligation to reduce concentration of artificial radioactive substances to "close to zero" by 2020

102. Ireland's rights under the LOSC are also shaped by the commitment undertaken by the United Kingdom in the Sintra Ministerial Declaration of 23 July 1998. The Ministers of the OSPAR Contracting Parties and the European Commission adopted the following commitment:

> "WE AGREE, in addition, to prevent pollution of the maritime area from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances. In achieving this objective, the following issues should, *inter alia*, be taken into account:
>
> – legitimate uses of the sea;
>
> – technical feasibility;
>
> – radiological impacts to man and biota.
>
> WE SHALL ENSURE that discharges, emissions and losses of radioactive substances are reduced by the year 2020 to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, are close to zero."

103. The Ministers also adopted an OSPAR Strategy with Regard to Radioactive Substances (Reference No. 1998-17), which adopts the following Objective:

> "In accordance with the general objective, the objective of the [OSPAR] Commission with regard to radioactive substances, including waste, is to prevent pollution of the maritime area from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances."

104. In meeting this Objective the OSPAR Strategy is stated to involve the application of the precautionary principle and requires Contracting Parties to take into account *inter alia* "the relevant international conventions and Contracting Parties' obligations under international law relevant to this OSPAR objective" (Radioactive Strategy, paras. 2.1 and 2.2).

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105. Ireland submits that the 1998 Sintra Ministerial Declaration, together with the Guiding Principles and in particular the precautionary principle, establish a presumption against discharges of radioactive substances into the marine environment from any new source. It is only with that interpretation that there can be achieved the commitment to reduce concentrations of radioactive substances in the marine environment to "close to zero" by 2020. The OSPAR Objective and the Guiding Principles which are relevant to the interpretation and application of the LOSC, which establishes clear obligations to prevent, control and reduce pollution. Ireland respectfully submits that it has the right to expect that the United Kingdom should fulfil its obligations under LOSC to prevent, control and reduce pollution.

The United Kingdom's violations of the obligation to prevent pollution to the marine environment

106. In its Statement of Claim Ireland has distinguished between the LOSC violations concerning marine pollution arising from (1) discharges or other releases of radioactive substances into the marine environment occurring by design, by accident or by terrorist act, and (2) the failure properly or at all to assess the risk of terrorist attack and prepare for the consequences of any such attack.

(1) Discharges or other releases of radioactive substances into the marine environment by design, accident or terrorist act

107. In its Statement of Claim Ireland asks the arbitral tribunal to declare:

> "That the United Kingdom has breached its obligations under Articles 192 and 193 and/or Article 194 and/or Article 207 and/or Articles 211 and 213 of [LOSC] in relation to the authorisation of the MOX plant, including by failing to take the necessary measures to prevent, reduce and control pollution of the marine environment of the Irish Sea from (1) intended discharges of radioactive materials and or wastes from the MOX plant, and/or (2) accidental releases of radioactive materials and/or wastes from the MOX plant and/or international movements associated the MOX plant, and/or (3) releases of radioactive materials and/or wastes from the MOX plant and/or international movements associated with the MOX plant resulting from terrorist act;"

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It will be apparent from the relief sought that Ireland considers that it has the right not to be adversely affected by radioactive discharges into the Irish Sea from the MOX plant or international movements of radioactive materials associated with it. From the time the plant is commissioned Ireland will be subject to new and intentional discharges which will have been authorised by the United Kingdom. However "minimal" the United Kingdom may consider those discharges to be, they are a certain and undisputed fact. And they are irreversible. Further, from the time the plant is commissioned Ireland will be subject to the risk of accidental discharges, or discharges caused by terrorist act, which come from a new source. The enhanced risk is also a fact. It is inconsistent with Ireland's rights under the LOSC, and it is inconsistent with the precautionary principle for those risks to be imposed on Ireland by the United Kingdom.

(a) Intended discharges from the MOX plant

108. Information relating to the intended discharges of radioactive substances from the MOX plant is limited. Until 3 October 2001 what was known was drawn principally from the 1993 Environmental Statement.[48] This confirmed that the plant would produce "various solid radioactive wastes, principally in the form of plutonium contaminated material" comprising process waste and maintenance waste, in an annual amount of "about 120 m^3" (1993 Environment Statement, para. 4.34-35). The Environmental Statement is opaque as to where the waste would go, providing merely that

> "[I]t is intended to route all PCM to the proposed new Water Treatment Complex (WTC) where it will be compacted to originally half its original volume before being prepared for ultimate disposal in a manner consistent with the Company's and the UK's strategy for the disposal of intermediate level waste." (*Ibid.*, emphasis added)

Ireland notes that this statement indicates only that the waste will be "prepared for disposal", does not indicate where it will be actually disposed, and does not indicate the types or quantities of radioactivity or the radionuclides associated with the waste

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48 The Decision of 3 October 2001 provides limited further information (one paragraph), but this information merely raises further questions, and the United Kingdom was plainly not intending to provide a further opportunity for these questions to be answered before the operation of the MOX plant: see Annex 1, p.107.

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(the problem is a potentially serious one in view of last month's decision two close two reprocessing facilities due to a lack of storage for waste: supra. para. 15).

109. The 1993 Environmental Statement confirms also that the MOX plant will produce liquid radioactive effluents. It indicates that these will be minimal, and that

> "effluent arising from floor washings and fuel assembly wash will be about $107m^3/yr$; this will be discharged, via THORP, to existing site facilities. The arisings will be conditioned as necessary to make them suitable, after monitoring, for discharge to sea." (1993 Environmental Statement, para. 4.37)

110. This confirms that radioactive wastes will be discharged directly into the Irish Sea. It does not indicate the types or quantities of radioactivity of the radionuclides associated with the waste to be discharged into the Irish Sea.

111. The 1993 Statement further confirms that the MOX plant "will have the potential for different levels of radioactive contamination and airborne activity" (1993 Environmental Statement, para. 4.39). The Statement confirms that some of the categories of ventilation extract will be discharged into the atmosphere, and that they will have a radioactive content (*Ibid.*, para. 4.41). Once again the Environmental Statement provides no information as to quantities or types of radiation.

112. Ireland considers that the discharges into the Irish Sea and into the atmosphere (some of which will enter the Irish Sea), are incompatible with the United Kingdom's obligations under Part XII of the LOSC, particularly when read in the light of the precautionary principle and the obligation set forth in the 1998 Sintra Ministerial Declaration. These discharges (whether directly into the marine environment or indirectly via the atmospheric route) constitute pollution within the meaning of Article 1(4) of the LOSC, which pollution will enter the marine environment, including areas over which Ireland exercises sovereign rights or has sovereignty.

113. In Ireland's view these discharges are incompatible with the United Kingdom's obligation "to protect and preserve the marine environment" (Article 192 LOSC). They are also incompatible the United Kingdom's obligations to "take all … measures … that are necessary to prevent, reduce and control pollution from any source" (Article 194(1)), to use "best practicable means" to achieve that result (*Ibid.*), to "ensure that activities under [the United Kingdom's] jurisdiction or control are so conducted as not

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to cause damage by pollution to [Ireland]" (Article 194(2)), and to ensure that "pollution arising from incidents or activities under [the United Kingdom's] jurisdiction or control does not spread beyond the areas where [the United Kingdom] exercise[s] sovereign rights in accordance with [LOSC]" (*Ibid.*).

114. Further, the proposed discharges violate the United Kingdom's obligation "to minimize to the fullest possible extent ... the release of toxic, harmful or noxious substances specially those which are persistent, from land-based sources, from or through the atmosphere or by dumping" (Article 194(3)(a)). The discharges also violate the obligations under Article 207 of the LOSC on pollution from land-based sources (in particular Article 207(2) and (5) of LOSC), Article 212 of LOSC on pollution from or through the atmosphere, and Article 213 of LOSC, on the enforcement of laws with respect to pollution from land-based sources.

115. The dangers to the marine environment, and consequently to human health, which are posed by existing reprocessing activities at the Sellafield site are widely recognised. A recent example is the independent report commissioned by the European Parliament's Scientific and Technological Option Assessment Programme, and dated August 2001. The Executive Summary of the STOA Report states:

> "Internal BNFL documents suggest significant increases in nuclide releases in the future at Sellafield. For some "worst case" scenarios, the operator predicts for "levels approaching or above limits" for sea discharges of over half the currently authorised radionuclides. A similar situation is expected for aerial releases."[49]

116. Against this background it is clear that any discharges from the new source represented by the MOX plant would violate the United Kingdom's LOSC obligations as set forth above.

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49 See Annex 2 p. 50.

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(b) Accidental releases from the MOX plant or international movements

117. When the plutonium can is opened and the MOX plant is commissioned, on or around 20 December 2001, there will be a material increase in the risk – in quantitative terms – of accidental discharges of radioactive substances from the MOX plant or from international movements associated with the plant. The poor track record of regulatory compliance at the Sellafield site, where numerous regulatory violations have occurred (see *supra*, para. 15), coupled with the absence of "a proper safety culture" within BNFL which the United Kingdom's Nuclear Installations Inspectorate identified as recently as 1999 (*supra*, para. 16), supports Ireland's concerns about further accidental discharges from the MOX plant and associated international shipments. Ireland respectfully submits that pending the outcome of the Annex VII arbitral procedure it has the right not to be subject to any accidental discharges or – consistently with the precautionary principle – to the threat or risk of accidental discharges from the MOX plant or new international movements associated with the plant. That right arises under Articles 192, 194, 207 and 212 of LOSC. That right will be violated if the MOX plant is commissioned prior to a determination of the merits of Ireland's case.

(c) Releases from the MOX plant or international movements as a result of terrorist act

118. The Sellafield site has already been identified as a prime target for terrorist attack (*supra*, paras 39 *et seq.*). Since 11 September 2001 the threat of terrorist attacks on Sellafield has increased significantly. The opening of the plutonium can at the MOX plant on or around 20 December 2001, and the increase in the number of international movements of spent nuclear fuel and MOX assemblies following the operation of the MOX plant, will create a new target at the Sellafield site – the plutonium-contaminated MOX plant – and new targets in the form of vessels transporting highly radioactive substances to and from the MOX plant. Ireland respectfully submits that pending the outcome of the Annex VII arbitral procedure it has the right not to be subject to any increased threat or risk of pollution resulting from terrorist attack. That right existed before 11 September 2001. After 11 September the importance of the right and the increased threat to it is incontestable. Authorising MOX at this time is wholly

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inconsistent with the precautionary principle or approach. Authorising MOX without engaging in new and additional security measures and cooperative arrangements with interested and potentially affected neighbours is unconscionable and wholly inconsistent with Ireland's rights under LOSC, in particular Articles 192, 194, 207 and 212 of LOSC. These rights cannot be preserved if the MOX plant is commissioned and commences operation.

(2) The failure properly or at all to assess the risk of terrorist attack and prepare for the consequences of any such attack

119. In its Statement of Claim Ireland asks the arbitral tribunal to declare:

> "That the United Kingdom has breached its obligations under Articles 192 and 193 and/or Article 194 and/or Article 207 and/or Articles 211 and 213 of [LOSC] in relation to the authorisation of the MOX plant by failing (1) properly or at all to assess the risk of terrorist attack on the MOX plant and international movements of radioactive material associated with the plant, and/or (2) properly or at all to prepare a comprehensive response strategy or plan to prevent, contain and respond to terrorist attack on the MOX plant and international movements of radioactive waste associated with the plant;"

120. Ireland considers that the United Kingdom has the obligation under LOSC Articles 192, 193, 194, 207, 211, 212 and 21 to fully assess the risk of terrorist attack on the MOX plant and on international movements of radioactive wastes associated with the operation of the plant. That obligation must necessarily be fulfilled before the plant becomes operational or international movements occur. That obligation existed prior to 11 September 2001; the events of that day and subsequently merely serve to underscore the importance of the obligation, and the need to redouble efforts to assess the risk and respond accordingly. As has already been noted, the Director-General of the IAEA said in October 2001:

> "Countries must demonstrate, not only to their own populations, but to their neighbours and the world that strong security systems are in place." (*supra*, para. 41)

The United Kingdom has provided no such demonstration to Ireland, its neighbour most directly affected by the threat to Sellafield.

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121. Together with the obligation to assess the risk there exists the obligations to prepare an appropriate response strategy to prevent terrorist attacks, to respond to them if they occur, and to contain or limit their consequences if they do occur. These obligations arise under the same provisions of LOSC as identified in the previous paragraph. It is self-evident that a full response strategy needs to be in place before the MOX plant operates and before any international movements of radioactive materials associated with the MOX plant are to occur. Ireland has no evidence that the United Kingdom has taken into account the events of 11 September 2001 in revisiting its previous response strategy, or that it has taken steps to put in place an upgraded response strategy. It seems probable that such a strategy will take time to develop, and that it can only be put in place with the cooperation of affected States. As the closest neighbour to Sellafield Ireland is obviously an affected and interested State, but it is not the only one. Ireland respectfully submits that in light of events of 11 September 2001, the United Kingdom has an obligation under LOSC to engage with each and every State which might be affected by any movement of radioactive material associated with the MOX plant before the MOX plant is authorised. It makes no sense, on policy or legal grounds, to authorise the plant and to then enter into consultations with a view to developing an appropriate response strategy. In such circumstances these States, including Ireland, are merely presented with a *fait accompli*, and their legitimate interests and rights cannot be taken into account. The failure to consult with affected States – Ireland and others – before the authorisation of the MOX plant is incompatible with the very purposes of the duty to cooperate.

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PART 3:

THE CONDITIONS FOR THE PRESCRIPTION OF PROVISIONAL MEASURES

122. This section sets out Ireland's submissions that the conditions set by the LOSC for the prescription of Provisional Measures have been met. This application for Provisional Measures is made under Article 290(5) of the LOSC. Both Ireland and the United Kingdom are States Parties to the Convention, which was ratified by Ireland on 21 June 1996 and by the United Kingdom on 25 July 1997. Article 290(5) enables this Tribunal to prescribe provisional measures pending the constitution of an arbitral tribunal to which a dispute is being submitted under Part XV, Section 2 of the Convention.

123. In order for an application under Article 290(5) to succeed it is necessary to show that *prima facie* the arbitral tribunal which is to be constituted would have jurisdiction and that the urgency of the situation so requires. The following paragraphs explain how those requirements are satisfied. They demonstrate that there is a dispute to which the procedures of Part XV, Section 2 of the Convention apply; that the dispute has been submitted to an arbitral tribunal in accordance with LOSC Part XV, Section 2, which arbitral tribunal is not yet constituted; that the *prima facie* the Annex VII arbitral tribunal would have jurisdiction; and that the urgency of the situation requires the prescription of provisional measures.

There is a dispute to which the procedures of Part XV, Section 2 of the LOSC apply.

124. As has already been explained, the dispute has emerged from the disagreement between Ireland and the United Kingdom in relation to:-

(1) the obligation of the United Kingdom to cooperate with Ireland in taking measures to protect and preserve the Irish Sea;

(2) the obligation of the United Kingdom to carry out a prior environmental assessment of the effects on the environment of the

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MOX plant and of international movements of radioactive materials associated with the operation of the plant;

(3) the obligations of the United Kingdom to protect the marine environment of the Irish Sea, including by taking all necessary measures to prevent, reduce and control further radioactive pollution of the Irish Sea.

The United Kingdom's failure to co-operate with Ireland, to assess the impacts of MOX production, and to protect the marine environment and to take all necessary measures to prevent, reduce and control pollution of the sea, arise in respect of both (i) the authorisation, location and operation of the MOX plant and (ii) the international movements of material by sea of radioactive materials associated operation of the plant.

125. Ireland has repeatedly sought to settle the dispute by requesting information, including information contained in the PA Report, and later the ADL Report. Copies of the letters requesting that information are set out in Annexes 1 and 2. Had the requested information been provided, Ireland would have been enabled to present detailed, reasoned arguments on the authorisation, location and operation of the MOX plant, addressing the grounds upon which the United Kingdom was basing its decisions on these matters.

126. The substantive dispute concerns "a disagreement on a point of law or fact, a conflict of legal views or of interests" (*Mavrommatis Palestine Concessions, Judgment No. 2, 1924, PCIJ, Series A, No.2*, p.11). The points of law and fact in issue are identified in the Notification and Statement of Claim dated 25 October 2001 by which the Annex VII arbitration was initiated, a copy of which appears as Annex 1 (page 1 et seq.). As will be seen in the statement of relief sought, at paragraph 41 of the Statement of Claim, the dispute concerns the question whether the United Kingdom has fulfilled its duties under Articles 192-194, 207, 211, 212 and 213 of the LOSC to prevent, reduce and control deliberate and accidental pollution of the Irish Sea, and to assess the risk of terrorist attack on the plant and on movements of radioactive material associated with it; its duties under Articles 123 and 197 of the convention to co-operate with Ireland in the protection of the marine environment of the Irish Sea; and its duties

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under Article 206 of the Convention properly to assess the potential effects of the MOX plant and associated activities upon the marine environment of the Irish Sea. Most of these provisions of the LOSC had been identified in Ireland's letters to the United Kingdom dated 30 July 1999 and 23 December 1999 as legal bases upon which Ireland's complaint rest.

127. It is clear that "the claim of one party is positively opposed by the other" (as it was put in the *South West Africa, Preliminary Objections, Judgement, ICJ Reports 1962*, p. 328). It must be supposed that the United Kingdom, when deciding to refuse to suspend temporarily the operation of the MOX plant, considered that it had fulfilled its duties under the Convention. As set out above (paras. 56-62), Ireland considers that the United Kingdom has violated those duties.

128. There is, therefore, a dispute in existence concerning the interpretation and application of the LOSC, which falls, in accordance with Article 288 of the LOSC, within the jurisdiction of the court or tribunal to which the dispute is submitted in pursuit of the provisions of Part XV, Section 2 of the LOSC. The dispute does not fall within any of the exceptions that limit the scope of Part XV, Section 2.

The dispute has been submitted to an arbitral tribunal in accordance with LOSC Part XV, Section 2, which arbitral tribunal is not yet constituted

129. On 25 October 2001 Ireland notified the United Kingdom of its request, in accordance with Article 286 of the LOSC, that the dispute concerning the authorisation, location and operation of the MOX plant be submitted to the compulsory procedures entailing binding decisions set out in Part XV, Section 2 of the LOSC. The notification is set out in Annex 1, page 1 et seq.

130. In accordance with Article 287(1) of the LOSC, the United Kingdom has, by its Declaration dated 12 January 1998, chosen the International Court of Justice for the settlement of disputes concerning the interpretation or application of the Convention. Ireland has made no choice of court or tribunal pursuant to Article 287(1). In the

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absence of agreement to the contrary, the dispute is therefore to be submitted to arbitration under Annex VII, in accordance with Article 287(5) of the LOSC.

131. Ireland has, in accordance with Annex VII, Article 3(b), nominated Professor James Crawford SC as an arbitrator. On 7 November 2001 the United Kingdom nominated Sir Arthur Watts an arbitrator; the other three members of the arbitral tribunal (the 'Annex VII tribunal') are still to be appointed.

Prima facie the Annex VII arbitral tribunal would have jurisdiction

132. It has been explained that the dispute is one to which LOSC Part XV, Section 2 applies, and which in principle falls within the jurisdiction of a tribunal constituted under that section. Ireland is entitled by LOSC Article 286 to submit the dispute to the Annex VII tribunal, no settlement having been reached by negotiation or other peaceful means as provided for in LOSC Part XV, Section 1. That Section of the Convention, in Article 283(1), obliges States Parties in dispute to proceed expeditiously to an exchange of views regarding settlement of the dispute.

133. The exhaustion of all possibility of finding a negotiated or other peaceful settlement of the present dispute was conclusively established on 13 September 2001, when the United Kingdom, responding to a request made by Ireland on 27 August 2001, refused to suspend the authorisation of the operation of the MOX plant. Three weeks later, on 3 October 2001, the United Kingdom decided that the MOX plant was economically justified, which enabled BNFL to move to the initial stages of plutonium commissioning. On 17 October 2001 BNFL stated that the plant would enter into operation on 23 November 2001, with the opening of a plutonium can in the MOX facility; on 6 November 2001 BNFL announced that the start date had been pushed back until 20 December 2001(see Annex 2, p. 28 et seq.).

134. The repeated refusals of the United Kingdom to temporarily suspend this process temporarily leaves no doubt that there is now no possibility of settlement of the dispute by negotiation or peaceful means, as envisaged in Article 283(1) of the Convention. The refusals appear *inter alia* in letters dated 17 December, 1999, 9 March 2000, and 27 October 2000, copies of which are set out in Annex 2, page 10 et seq. There is

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moreover, now no time available for further discussion of alternative means for handling the dispute.

135. There is plainly a dispute, in which specific violations of LOSC are explicitly pleaded, and have been explicitly raised in communications between Ireland and the United Kingdom for over two years. The claims made by Ireland clearly meet the requirement, set out by the Arbitral Tribunal in the *Southern Bluefin Tuna* case, that "the claims made, to sustain jurisdiction, must reasonably relate to, or be capable of being evaluated in relation to, the legal standards of the treaty in point": *Southern Bluefin Tuna Case*, (2000), 39 ILM 1359 (2000), paragraph 48.

136. The Annex VII tribunal has *prima facie* jurisdiction over that dispute concerning the interpretation and application of the convention. There is no other tribunal that has jurisdiction in respect of the complaints concerning the interpretation and application of the LOSC. In particular the OSPAR tribunal which has been constituted has no such jurisdiction. The question put the OSPAR concerns only Article 9 of the OSPAR Convention, which relates solely to the disclosure of information. The substantive question of the legality of the United Kingdom's conduct in relation to the MOX plant is not in issue in the OSPAR arbitration.

137. Moreover, the OSPAR Convention does not prescribe the same detailed legal obligations as are prescribed by the LOSC. Another OSPAR tribunal could not be constituted to address Ireland's claims in this case, since the precise obligations imposed on the United Kingdom by the LOSC, for example in relation to the protection of the marine environment (Articles 192 and 194), the assessment of environmental effects (Article 206) and the duty to cooperate (Articles 123 and 197), do not appear in the OSPAR Convention. Similarly, the obligation to adopt laws and regulations to prevent, reduce and control pollution from land-based sources (LOSC, Article 207) is not matched by provisions in the OSPAR Convention. Ireland cannot be deprived by the existence of narrower rights under OSPAR of its right to invoke its wider rights under the LOSC.

138. Furthermore, even to the extent that there is overlap between LOSC and the OSPAR Convention, that overlap cannot deprive Ireland of the right to initiate

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proceedings under the LOSC. As the Arbitral Tribunal in the Southern Bluefin Tuna Case put it:

> "[…] the tribunal recognizes as well that it is a commonplace of international law and State practice for more than one treaty to bear upon a particular dispute. There is no reason why a given act of a State may not violate its obligations under more than one treaty. There is frequently a parallelism of treaties, both in their substantive content and in their provisions for settlement of disputes arising thereunder. The current range of international legal obligations benefits from a process of accretion and accumulation […]" (*Southern Bluefin Tuna Case*, (2000), 39 ILM 1359 (2000), paragraph 52).

139. Ireland respectfully submits that the requirement of Article 290(5) of the LOSC, that it be shown that *prima facie* the Annex VII tribunal would have jurisdiction, is satisfied.

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PART 4:

THERE EXISTS A SITUATION OF URGENCY AND IRELAND'S RIGHTS WILL BE IRREVOCABLY HARMED IF PROVISIONAL MEASURES ARE NOT PRESCRIBED

140. If this Tribunal is to prescribe provisional measures, it is necessary that the Tribunal consider that the urgency of the situation so requires: LOSC Article 290(5). Although Article 290(5) does not explicitly so state, it is reasonable to suppose that such provisional measures, like those prescribed under Article 290(1), should be "appropriate under the circumstances to preserve the respective rights of the parties to the dispute or to prevent serious harm to the marine environment, pending the final decision" of the tribunal adjudicating upon the merits of the case.

141. The need to demonstrate urgency is, in the submission of Ireland, satisfied by the fact that it is the intention of the operator of the MOX plant to commission the plant on 20 December 2001, and that it is the intention of the Government of the United Kingdom to authorise or permit that commissioning. These intentions are made evident in the BNFL letters to Friends of the Earth dated 17 October 2001 and 6 November 2001 (copies of which appear at the Annex 2, p. 28 et seq.), and the letters from the United Kingdom Government to the Irish Government communicating the refusal of the United Kingdom Government to delay the start of operations in the MOX plant (copies of which appear at Annex 1, p. 106).

142. The deadline of 20 December has been fixed. On that date the release of plutonium within the MOX plant means that the United Kingdom will have taken the decisive step to commission and operate a plutonium reprocessing facility on the coast of the Irish Sea. With that event the MOX plant will become contaminated and releases into the environment, including the marine environment of the Irish Sea, will occur. Such releases are irreversible.

143. As has been explained above, it is the submission of Ireland that the United Kingdom has obligations under the LOSC to:

- co-ordinate the implementation of its rights and duties with respect to the protection and preservation of the marine environment with

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Ireland, as the other littoral State on the Irish Sea (LOSC, Articles 123(b) and 197), and/or

- to prevent and control pollution arising from or in connection with the operation of the MOX plant, *inter alia* by establishing necessarily mechanisms in advance of the commissioning of the MOX plant (LOSC, Articles 192-194); and/or
- to assess in advance of the commissioning of the MOX plant the full range of potential effects of the operation of the plant upon the marine environment, and to communicate the results of such assessments (LOSC, Article 206);
- and/or to adopt in advance of the commissioning of the MOX plant laws, regulations and other measures necessary to prevent and control pollution from the plant (LOSC, Article 207, 212, 213) and from vessels carrying radioactive materials associated with the operation of the plant (LOSC, Article 211).

144. Those duties, which oblige the United Kingdom to take certain steps before the commissioning of the plant, plainly cannot be fulfilled after the plant is commissioned. If, as it claims in the proceedings before the Annex VII arbitral tribunal, Ireland has the right to insist that the United Kingdom fulfil those duties before the commissioning of the plant, those rights will be irrevocably violated if the plant is commissioned before the United Kingdom fulfils its duties.

145. In addition, once plutonium is introduced into the MOX plant and it commences operations, some discharges into the marine environment will occur, with irreversible consequences. Further, the danger of radioactive leaks and emissions, whether as functions of the operation of the plant, or resulting from industrial accidents, terrorist attacks, or other causes, is greatly magnified.

146. Furthermore, the commissioning of the plant is, in practical terms, itself a near-irreversible step. Once plutonium has been introduced into the system it is both technically difficult, and expensive, to "decontaminate" the plant, as BNFL itself has

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confirmed. It is not possible to return to the position that existed before the commissioning of the MOX plant simply by ceasing to feed plutonium into the system.

147. For all these reasons, the grant of the relief sought by Ireland from the Annex VII arbitration would be futile if the MOX plant were allowed to operate before the Annex VII tribunal has ruled on the merits of Ireland's claim. This is apparent from the fifth paragraph of the statement of relief sought by Ireland which reads as follows:

> "[…] Ireland requests the Arbitral tribunal to order and declare:
>
> (5) That the United Kingdom shall refrain from authorising or failing to prevent (a) the operation of the MOX plant and/or (b) international movements of radioactive materials into and out of the United Kingdom related to the operation of the MOX plant or any preparatory or other activities associated with the operation of the MOX [plant] until such time as (1) there has been carried out a proper assessment of the environmental impact of the operation of the MOX plant as well as related international movements of radioactive materials, and (2) it is demonstrated that the operation of the MOX plant and related international movements of radioactive materials will result in the deliberate discharge of no radioactive materials, including wastes, directly or indirectly into the marine environment of the Irish Sea, and (3) there has been agreed and adopted jointly with Ireland a comprehensive strategy or plan to prevent, contain and respond to terrorist attack on the MOX plant and international movements of radioactive waste associated with the plant."

148. Ireland respectfully submits that the inevitability of irreparable prejudice to the right of Ireland to insist upon these preconditions to the commissioning of the plant, if the plant is commissioned before a ruling on the merits of its claim, is obvious. Ireland further submits that the precautionary principle might usefully inform the assessment by the Tribunal of the urgency of the measures it is required to take in respect of the operation of the MOX plant.

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CONCLUSIONS AND RELIEF SOUGHT

149. Ireland respectfully submits that the conditions for the prescription of provisional measures under Article 290(5) LOSC are satisfied. The Annex VII arbitral tribunal will have prima facie jurisdiction. Ireland has rights under UNCLOS the exercise of which will be irrevocably lost or diminished if the MOX plant is commissioned on 20 December 2001. There exists a situation of urgency. And the Provisional Measures requested would preserve Ireland's rights pending the constitution of the Annex VII arbitral tribunal.

150. For the reasons set out above, pending the constitution of the arbitral tribunal under Annex VII of UNCLOS, Ireland requests that ITLOS prescribe the following provisional measures:

(1) that the United Kingdom immediately suspend the authorisation of the MOX plant dated 3 October 2001, alternatively take such other measures as are necessary to prevent with immediate effect the operation of the MOX plant;

(2) that the United Kingdom immediately ensure that there are no movements into or out of the waters over which it has sovereignty or exercises sovereign rights of any radioactive substances or materials or wastes which are associated with the operation of, or activities preparatory to the operation of, the MOX plant;

(3) that the United Kingdom ensure that no action of any kind is taken which might aggravate, extend or render more difficult of solution the dispute submitted to the Annex VII tribunal (Ireland hereby agreeing itself to act so as not to aggravate, extend or render more difficult of solution that dispute); and

(4) that the United Kingdom ensure that no action is taken which might prejudice the rights of Ireland in respect of the carrying out of any decision on the merits that the Annex VII tribunal may render (Ireland likewise will take no action of that kind in relation to the United Kingdom).

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Dublin, 9 November 2001

David O'Hagan

Chief State Solicitor

Agent for Ireland

Seen for the authentication of
Signature ~~/ seal~~ of
DAVID O' HAGAN

Signed

Position LEGAL DIVISION 1ST SECRETARY

Date 9 November 2001

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TABLE OF ANNEXES

Annex 1

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Annex 2

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Corrigendum

1 Corrigendum to the Request submitted by Ireland on 12 November 2001

CORRIGENDUM

Replace earlier draft of paragraphs 7 and 8 of Ireland's Request for Provisional Measures and Statement of Case (9 November 2001) with the following text:

7. BNFL is responsible for most of the activities carried out at the Sellafield site. BNFL is engaged in a range of commercial nuclear activities, including the reprocessing of spent nuclear power reactor fuels and the production of MOX fuel. It is expected to operate as a commercial entity. Sellafield is currently not a military site and it is not engaged in military activities. The reprocessing of nuclear waste fuel and discharges began at Sellafield (then called Windscale) in the 1950s. In 1993 a MOX production facility – known as the MOX Demonstration Facility (MDF) – began producing small quantities (8 tonnes per annum) of Mixed Oxide (MOX) fuel for Light Water Reactors. In 1994 the Thermal Oxide Reprocessing Plant ("THORP") began operating, reprocessing spent nuclear fuel elements from Advanced Gas Cooled Reactors (AGR's) and Light Water Reactors (LWR's), separating plutonium and uranium from fission products. A second reprocessing facility – the B2O5 Plant – reprocesses spent fuel from Magnox reactors at Sellafield. The MOX plant which is the subject of this dispute is intended by BNFL to significantly increase MOX fuel production for use in Pressurised Water Reactors (PWR) and Boiling Water Reactors (BWR). It is intended to have a maximum output of 120 tonnes of heavy metal per year (tHM/y). No nuclear reactors in the United Kingdom currently use MOX and so at present all the MOX fuel produced at this facility will be exported. The process to be used at the new MOX plant is unique and, Ireland respectfully submits, constitutes an experiment with unacceptable risks for Ireland.

8. The production and use of MOX fuel involves three stages with significant implications for the marine environment, which may be briefly summarized. First, spent reactor fuel elements, containing plutonium, unused uranium and fission products, are transported to Sellafield, mostly by sea. Second, the spent reactor fuel is reprocessed at THORP where uranium, plutonium and fission products are separated; the plutonium, in the form of plutonium oxide is then mixed with uranium oxide at the MOX plant to make MOX pellets which are then placed into new fuel rods. Third, rods are assembled into fuel assemblies for use in nuclear power reactors and the fuel assemblies are transported from Sellafield, again mostly by sea.

(Corrigendum continued)

2 Letter from the Registrar of the Tribunal to the Agent of the United Kingdom dated 12 November 2001 requesting comments on 1 above (reproduced without attachment)

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA
TRIBUNAL INTERNATIONAL DU DROIT DE LA MER

Am Internationalen Seegerichtshof 1, 22609 Hamburg, Germany
Tel: 49 (40) 3560-7270 Fax: 49 (40) 3560-7275

12 November 2001
BY FACSIMILE

Dear Sir,

Request for provisional measures under article 290, paragraph 5, of the United Nations Convention for the Law of the Sea

By letter dated 12 November 2001, the Agent of Ireland informed the Tribunal that minor points in paragraphs 7 and 8 of the Request for provisional measures submitted on 9 November 2001 would require rectification. A corrigendum was attached to the said letter (see attached).

Pursuant to article 65, paragraph 4, of the Rules of the Tribunal, I would appreciate if you could inform me by 14 November 2001 whether you would have any objection to the corrections proposed by Ireland.

Yours sincerely,

Philippe Gautier
Registrar

Mr. Michael C. Wood, CMG
Agent for the United Kingdom of Great Britain
and Northern Ireland
British Consulate General
Harvestehuder Weg 8a
20148 Hamburg

cc Foreign and Commonwealth Office, Fax 0044-20-7270-3071

(Corrigendum continued)

3 Letter from the Agent of the United Kingdom dated 12 November 2007 indicating that there are no objections to the corrigendum

12 NOV 2001

By Fax: 00 49 40 3560 7275

Foreign & Commonwealth Office

Room K.1.172
King Charles Street
London SW1A 2AH

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E-mail: Michael.Wood@fco.gov.uk

12 November 2001

M. Philippe Gautier
Registrar
International Tribunal for the Law of the Sea
Am Internationalen Seegerichtschof 1
22609 Hamburg
Germany

Dear Sir,

REQUEST FOR PROVISIONAL MEASURES UNDER ARTICLE 290, PARAGRAPH 5, OF THE UNITED NATIONS CONVENTION FOR THE LAW OF THE SEA

I have the honour to refer to your letter of 12 November concerning corrections proposed by Ireland to the Request for provisional measures, and to inform you that I have no objection to these corrections being made.

Yours sincerely,

Michael C Wood

M C Wood
(Agent of the United Kingdom of Great Britain and Northern Ireland)