Center at Portals II, CY–A257, 445 12th Street, SW, Washington, D.C. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3800, 1231 20th Street, NW, Washington, D.C. 20036.

List of Subjects in 47 CFR Part 73

Radio Broadcasting.

Part 73 of Title 47 of the Code of Federal Regulations is amended as follows:

PART 73—RADIO BROADCAST SERVICES

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334, 336.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Vermont, is amended by adding Brighton, Channel 295A.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch Policy and Rules Division Mass Media Bureau.

[FR Doc. 01–11170 Filed 5–3–01; 8:45 am]

BILLING CODE 6712–01–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[DA 01–1065; MM Docket No. 00–123, RM 9903]

Radio Broadcasting Services; Rincon, PR.

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document denies a Petition for Reconsideration filed by Jose J. Arzuaga, Jr., d/b/a Ocean Communications directed to the *Report and Order* in this proceeding which denied a proposal for a Channel 300B allotment at Rincon, Puerto Rico. *See* 66 FR 10658, February 16, 2001. With this action, the proceeding is terminated.

FOR FURTHER INFORMATION CONTACT: Robert Hayne, Mass Media Bureau (202) 418–2177.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's *Memorandum Opinion and Order* in MM Docket No. 00–123, adopted April 18, 2001, and released April 24, 2001. The full text of this decision is available for inspection and copying during normal business hours in the FCC Reference Information Center at Portals ll, CY–A257, 445 12th Street, SW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3805, 1231 M Street, NW., Washington, DC 20036.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 01–11171 Filed 5–3–01; 8:45 am]

BILLING CODE 6712–01–U

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[DA 01–1016; MM Docket No. 90–195, RM–7152]

Radio Broadcasting Services; Brookline, Missouri

AGENCY: Federal Communications Commission.

ACTION: Final rule; petition for reconsideration.

SUMMARY: This document dismisses as moot a Petition for Reconsideration filed by Lake Broadcasting, licensee of Station KBMX(FM), Channel 270A, Eldon, Missouri and permittee of Station KFXE(FM), Channel 271A, Cuba Missouri, of the *Report and Order* in this proceeding, which allotted Channel 271 at Brookline, Missouri, as a first local service. *See* 60 FR 62219 published December 5, 1995. Lake had argued that the Brookline allotment prejudices Lake's reconsideration petition in MM Docket 89–120 for an upgrade of its Eldon station, but the staff ruled that the Brookline petition was moot in view of the Commission's revocation of Lake's license for its Eldon and other stations, the affirmance by the U.S. Court of Appeals for the DC Circuit, and the denial of certirorari by the U.S. Supreme Court and in view of the Commission's dismissal of Lake's reconsideration petition in MM Docket 89–120. This document also denies Lake's motion to set aside the *Report and Order*, holding that the Brookline allotment is valid even though the original rulemaking proponent did not file an application for the allotment because four other parties did file applications. With this action, the proceeding is terminated.

FOR FURTHER INFORMATION CONTACT: Andrew Rhodes, Mass Media Bureau (202) 418–2120.

SUPPLEMENTARY INFORMATION: This is a synopsis of the Commission's *Memorandum Opinion and Order* in MM Docket No. 90–195, adopted April 11, 2001, and released April 20, 2001. The full text of this decision is available for inspection and copying during normal business hours in the FCC Reference Information Center at Portals ll, CY–A257, 445 12th Street, SW., Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractor, International Transcription Service, Inc., (202) 857–3805, 1231 M Street, NW., Washington, DC 20036.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 01–11176 Filed 5–3–01; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 216

[Docket No. 000218048–1095–03; I.D. 013100A]

RIN 0648–AN59

Taking and Importing Marine Mammals; Taking Marine Mammals Incidental to Naval Activities

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: NMFS, upon application from the U.S. Navy is issuing regulations to govern the unintentional take of a small number of marine mammals incidental to shock testing the USS WINSTON S. CHURCHILL (DDG-81) in the offshore waters of the Atlantic Ocean off Mayport, FL. Issuance of regulations governing unintentional incidental takes of marine mammals in connection with particular activities is required by the Marine Mammal Protection Act (MMPA) when the Secretary of Commerce (Secretary), after notice and opportunity for comment, finds, as here, that such takes will have a negligible impact on the species and stocks of marine mammals and will not have an unmitigable adverse impact on the availability of them for subsistence uses. These regulations do not authorize the Navy activity as such authorization is not within the jurisdiction of the Secretary. Rather, these regulations

authorize the unintentional incidental take of marine mammals in connection with such activities and prescribe methods of taking and other means of effecting the least practicable adverse impact on the species and its habitat, and on the availability of the species for subsistence uses.

DATES: Effective May 1 through September 30, 2001.

ADDRESSES: Copies of the Letter of Authorization (LOA), the Navy application, and the NMFS Biological Opinion and Incidental Take Statement may be obtained by writing to Donna Wieting, Chief, Marine Mammal Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910–3226 or by telephoning the contact listed here (see **FOR FURTHER INFORMATION CONTACT**). A copy of the Navy's Final Environmental Impact Statement (FEIS) for conducting the shock trial are available by contacting Will Sloger, U.S. Navy, at (843) 820–5797.

Comments regarding the burden-hour estimate or any other aspect of the collection of information requirement contained in this final rule should be sent to the preceding address and to the Office of Information and Regulatory Affairs, Office of Management and Budget (OMB), Attention: NOAA Desk Officer, Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Kenneth R. Hollingshead (301) 713–2055, ext. 128.

SUPPLEMENTARY INFORMATION:

Background

Section 101(a)(5)(A) of the Marine Mammal Protection Act (16 U.S.C. 1361 *et seq.*) (MMPA) directs the Secretary of Commerce (Secretary) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and regulations governing the taking are issued.

Permission may be granted for periods of 5 years or less if the Secretary finds that the taking will have no more than a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses, and if regulations are prescribed setting forth the permissible methods of taking and the requirements pertaining to the monitoring and reporting of such taking.

Summary of Request

On January 12, 2000, NMFS received an application for an LOA under section 101(a)(5)(A) of the MMPA from the U.S. Navy to take a small number of marine mammals incidental to shock testing the USS WINSTON S. CHURCHILL in the offshore waters of the Atlantic Ocean off either Mayport, FL, or Norfolk, VA or the offshore waters of the Gulf of Mexico off Pascagoula, MS. However, based, in part, on findings and determinations made under the National Environmental Policy Act (NEPA), the Navy has determined that Mayport, FL is the preferred location for the shock trial. As a result, NMFS has conducted its analysis of impacts on marine mammal stocks based only on this location. For the Navy to make a determination to conduct the shock trial at another location, a new negligible impact determination and a modification of these regulations would be necessary before an LOA could be issued.

Section 2366, Title 10, United States Code (10 U.S.C 2366) requires realistic survivability testing of a covered weapon system to ensure the vulnerability of that system under combat conditions is known. (In this case, the covered weapon system is the USS WINSTON S. CHURCHILL.) Realistic survivability testing means testing for the vulnerability of the ship in combat by firing munitions likely to be encountered in combat with the ship configured for combat. This testing is commonly referred to as ''Live Fire Test & Evaluation''(LFT&E). Realistic testing by firing live ammunition at the ship or detonating a real mine against the ship's hull, however, could result in the loss of a multi-million dollar Navy asset. Therefore, the Navy has established an approved LFT&E program to complete the vulnerability assessment of ships as required by 10 U.S.C. 2366. The LFT&E program includes three major areas that together provide for a complete and comprehensive evaluation of the survivability of ships in a near miss, underwater explosion environment. These areas are computer modeling and analysis, component testing, and an at-sea ship shock trial. While computer modeling and laboratory testing provide useful information, they cannot substitute for shock testing under realistic, offshore conditions as only the at-sea shock trial can provide the real-time data necessary to fully assess ship survivability.

A shock test is a series of underwater detonations that propagate a shock wave through a ship's hull under deliberate and controlled conditions. Shock tests simulate near misses from underwater explosions similar to those encountered in combat. Shock testing verifies the accuracy of design specifications for shock testing ships and systems, uncovers weaknesses in shock sensitive components that may compromise the performance of vital systems, and provides a basis for correcting deficiencies and upgrading ship and component design specifications. To minimize cost and risk to personnel, the first ship in each new class is shock tested and improvements are applied to later ships of the class.

The USS WINSTON S. CHURCHILL is the third ship in a new Flight of 23 ARLEIGH BURKE (DDG 51)-class guided missile destroyers being acquired by the Navy. (A Flight is a subset of a class of ships to which significant modifications/upgrades have been made.) These ships are referred to as the Flight IIA ships and they represent the largest single upgrade to the original DDG 51-class destroyer.

The USS JOHN PAUL JONES (DDG 53) was shock tested off the coast of California in June 1994 to assess the survivability of the original DDG 51-class destroyer. Flight IIA ships are significantly different from the original DDG 51-class destroyers in their design. Major structural changes include the addition of a helicopter hangar, Vertical Launch System foundation changes, and raising the aft radar arrays. Major equipment changes include the addition of a ship-wide Fiber Optic Data Multiplexing System, a Zonal Electrical Power Distribution System involving the addition of switchboards and load centers throughout the ship, and the widespread use of commercial equipment in various mission critical systems to reduce the cost of the ships. Typically the lead ship of a new class or major upgrade is shock tested. The USS WINSTON S. CHURCHILL was selected as the shock trial ship because it has additional design changes that will not be included in the first two Flight IIA ship; therefore, it is more representative of the Flight.

The Navy's proposed action is to conduct a shock trial of the USS WINSTON S. CHURCHILL at an offshore, deep-water location. The ship would be subjected to a series of three or four 4,536 kg (10,000 lb) explosive charge detonations sometime between May and 30 September, 2001. Three detonations are needed to collect adequate data on survivability. A fourth detonation would be conducted by the Navy only if one of the planned three detonations fails to provide technically acceptable data (e.g., due to equipment

failure or some other technical problem).

The ship and the explosive charge would be brought closer together with each successive detonation to increase the severity of the shock. This gradation in severity would ensure that the survivability of the ship and its systems is fully assessed and the point at which failure modes begin is accurately determined. It would also reduce the chance of significant damage at the highest severity detonation. The shock trial would be conducted at a rate of one detonation per week to allow time to perform detailed inspections of the ship's systems prior to the ship experiencing the next level of shock intensity.

Comments and Responses

On December 12, 2000 (65 FR 77546), NMFS published a proposed rule to authorize the Navy to take small numbers of marine mammals incidental to the exemption and requested comments on the proposed rule and application. During the 45-day public comment period, NMFS received comments from the Marine Mammal Commission (MMC), the American Cetacean Society (ACS), the Cetacean Society International (CSI), Earth Island Institute (EII), the Humane Society of the United States (HSUS), the Natural Resources Defense Council (NRDC), the OrcaLab, the Stop LFAS Worldwide Network (SLFASWN), and the Whale and Dolphin Conservation Society (WDCS).

Activity Concerns

Comment 1: The SLFASWN considered it peculiar that the permit application lacked geo-specific information on the proposed location of the shock trial. It appeared to the commenter that without an exact location, the potential for impact is unknown. The SLFASWN would like to know the process used in determining the location for the shock trial.

Response: The application noted that the shock trial was proposed to take place in one of three locations, off Norfolk, VA, Mayport, FL, or Pascagoula, MS. While the Navy's small take application discussed only the potential impacts to marine mammals (as is appropriate), substantial information on the impacts to the total marine environment was provided in the accompanying draft environmental impact statement (DEIS) that was prepared by the Navy for this proposed action. Likewise, the Navy's DEIS provided detailed discussion on the parameters used in determining the proposed location for the shock trial.

Comment 2: The SLFASWN asked whether the proposed shock trial for the USS WINSTON S. CHURCHILL is a ''floating flotilla of future shock tests.'' The SLFASWN believes the rule would be effective for 5 years and would provide the Navy a ''carte blanche'' ticket for shock trials.

Response: The proposed shock trial for the USS WINSTON S. CHURCHILL is a single shock trial of three or four detonations that is proposed to take place between May 1 and September 30, 2001. If the Navy proposes future shock trials for other vessels, the Navy would need to meet its responsibilities under NEPA, the MMPA, and the Endangered Species Act (ESA) prior to conducting another shock trial. This final rule does not authorize additional shock trials.

MMPA Concerns

Comment 3: The MMC believes that NMFS' proposal to limit Level B acoustic harassment from explosive detonation events exclusively in terms of temporary threshold shift (TTS) is tantamount to determining that behavioral changes not related to TTS do not constitute harassment as defined in the MMPA. Such a conclusion, the MMC contends, would be inconsistent with the statutory definition of the term harassment.

Response: First, NMFS would like to clarify that the proposed criterion limiting Level B harassment to behavioral responses that are possible as a result of receiving an impairment to hearing (i.e., TTS) is limited to single-event explosions, not multiple explosive events spaced over a relatively short period of time in the same vicinity, such as multiple Signal, Underwater Sound (SUS) charges and live-fire exercises, nor to multiple impulse-noise sources, such as seismic airguns and the pulse-power generator, nor to intermittent and continuous noise sources such as Navy sonars and oceanographic instrumentation. All of these other listed activities have at least the potential to cause significant behavioral responses on the part of marine mammals that are not related to behavioral disruptions caused by TTS.

For those species of marine mammals capable of hearing the distant sounds from the detonation, simply hearing the acoustic signal and not reacting to that noise is not considered a ''take.'' NMFS considers a Level B harassment take to occur within the maximum zone for TTS, which, for this action at Mayport, FL, has been calculated by the Navy as follows:

Water Depth (ft/m)	600/183	1200/366	2,300/701
Odontocetes (nm/km)	7.2/13.3	11.0/20.4	13.6*/25.2
Mysticetes (nm/km)	13.0/24.1	13.0/24.1	15.0/27.8

* determined by the 12 lbs/in^2 criterion

The different TTS distances between odontocetes and mysticetes are based on their probable differing hearing sensitivity to LF sounds (Navy FEIS, 2001).

Beyond the range for TTS, NMFS has been unable to identify behavioral reactions on the part of a marine mammal from a single-noise event that would both disrupt some behavior pattern in a biologically significant way and have a reasonable probability of occurrence. For a take to be considered to have occurred, the marine mammal would need to show some form of behavioral reaction and the only behavioral reactions possibly occurring from a single noise event are either momentary reactions such as an orientation response relative to the unusual event or other reactions such as a startle response, an interruption in vocalization, or a sensitization.

The definition of Level B harassment, when applied to incidental takings, questions whether a single, minor, reaction (such as a startle, a ''heads-up'' (alert) display, or a single modified dive sequence by either pinnipeds or cetaceans), that has no biological context, should qualify as a ''take'' under the definition of ''harassment'' under the MMPA. As stated by NMFS previously (66 FR 9291, February 7, 2001), if the only reaction to the activity on the part of the marine mammal is within the normal repertoire of actions that are required to carry out that behavioral pattern, NMFS considers the activity not to have caused an incidental disruption of the behavioral pattern, provided the animal's reaction is not otherwise significant enough to be considered disruptive due to length or severity. Therefore, for example, a short-

term change in breathing rates or a somewhat shortened or lengthened dive sequence that are within the animal's normal range and that do not have any biological significance (i.e., do not disrupt the animal's overall behavioral pattern of breathing under the circumstances), do not rise to a level requiring a small take authorization. For single explosive events, a determination that these minor effects should not be considered to be harassment of a marine mammal was supported unanimously by the marine mammal scientists attending the NMFS Acoustic Criteria Workshop in 1998. Under a restrictive definition of ''harassment'' under the MMPA, an incidental taking could be presumed to occur for even a single pinniped lifting or turning its head to look at a passing, offshore, watercraft. NMFS notes that, in 50 CFR 17.3, the U.S. Fish and Wildlife Service defines harass as an action that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering.'' NMFS supports such a definition when marine mammals are taken incidental to the conduct of a maritime activity. However, the application of Level B harassment as described in this preamble is intended to apply only to incidental taking by harassment for this and similar one-time actions and not for actions directed at marine mammals which may have a lower threshold of application.

Comment 4: The HSUS, in a follow-up comment to NMFS' response number 1 in the proposed rule, questions NMFS considering a permanent threshold shift (PTS) in hearing to be Level A harassment. According to HSUS, Level A harassment should be reserved for the ''potential to injure.'' Since PTS is an injury, in an acoustically oriented species, such as cetaceans, it should be considered as ''serious injury,'' not Level A harassment.

Response: Depending upon the level of severity, PTS may or may not be considered to be a serious injury. For example, a permanent 15 dB loss across the animal's entire hearing range might be considered a severe injury, whereas a permanent loss of 15 dB in only a few frequencies of the hearing range might not be considered severe. It is simply not possible at this time to make a scientific judgement about the severity of different degrees of permanent hearing loss in marine mammals with the present state of scientific knowledge. However, the MMPA does not specifically include ''injury'' under the definition of ''take;'' it includes ''harass'' under the definition of ''take'' and specifically includes ''potential to injure'' only under the definition of ''Level A harassment.'' Therefore, the MMPA does not distinguish between ''potential to injure'' and an actual injury, nor does it distinguish between serious injury and non-serious injury. However, it is NMFS' preference to review all small take applications with the potential to cause serious injury under section 101(a)(5)(A) of the MMPA (as the Navy is doing in this action). This was expressed by NMFS in proposed rulemaking establishing the protocol for issuing authorizations under section 101(a)(5)(D) of the MMPA (60 FR 28379, May 31, 1995).

Comment 5: The CSI, quoting from the National Research Council (NRC, 2000) report on LF sound, notes that the NRC ''recommends that in the absence of appropriate, adequately funded research ''management of sound in the ocean should remain conservative . . . in the absence of required knowledge.'' The CSI, noting that in the absence of adequate data, NMFS and the Navy should apply the Precautionary Principle, the fundamental elements of the principle being: the existence of some indication of threat of harm; the harm is serious or irreversible; scientific uncertainty as to the nature or severity of the outcome; and an obligation on decision-makers. Finally, CSI asks whether NMFS refutes the application of this principle to the LOA and rule-making at hand.

Response: The MMPA prohibits the taking of marine mammals unless exempted or permitted. Taking means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal. Therefore, NMFS believes that the precautionary principle is already at the core of the MMPA. However, because the MMPA authorizes the taking of marine mammals under section 101(a)(5), provided certain conditions and requirements are met, NMFS must prudently apply the Precautionary Principle through careful analysis of impacts and implementation of measures that will reduce impacts to marine mammals to the lowest level practicable. As described in this document, NMFS believes that it and the Navy have applied the Precautionary Principle to the greatest extent possible for this action through an extensive aerial monitoring and mitigation program that will protect marine mammals to the greatest extent practicable. The mitigation and monitoring program are discussed later in this document. In addition, NMFS and the Navy have applied the precautionary principle by having the decision-making process in the public forum through NEPA and notice and comment rulemaking.

Comment 6: OrcaLab requests that NMFS proceed with caution and reject both the Navy's request for permission to proceed with the ship shock trial and the proposal to classify 182 dB as Level B harassment.

Response: The Navy's proposal to classify the 182 dB (re 1 uPa^2–sec) criterion is discussed later in this document. However, NMFS must clarify that the Navy is not requesting an authorization to conduct the shock trial, only the taking of marine mammals incidental to that activity. Whether or not the Navy conducts the shock trial of the USS WINSTON S. CHURCHILL is the responsibility of the Secretary of the Navy, not NMFS.

Comment 7: The ACS requests NMFS provide peer-reviewed, independent scientific studies in support of the 182 dB (re 1 uPa^2–sec) criterion level.

Response: There is no requirement to require independent peer-reviewed research studies prior to issuing an authorization under the MMPA. Independent peer-review for marine mammal monitoring or research is required under section 101(a)(5) of the MMPA only for incidental harassment authorizations that affect Arctic subsistence uses. Since the shock trial is not taking place in Arctic waters, or affecting subsistence species, independent peer review is not required. However, it should be understood that several of the documents referenced in the proposed rule and in this document have been peer reviewed prior to publication in scientific journals. For example, the Schlundt et al. (2000) and Finneran *et al.* (2000) research papers, which are discussed later in this document, were peer reviewed prior to publication in the Journal of the Acoustical Society of America.

Comment 8: OrcaLab believes that the cetacean deaths and strandings in the Bahamas in March 2000, which coincided with U.S. Navy activities, should be sufficient evidence of the potential risks to cause NMFS to reject the authorization, at least at this time. OrcaLab and the WDCS recommend that NMFS wait until the ongoing investigation of the causes of the Bahamas strandings are known before allowing the U.S. Navy to carry out further high risk activities that involve exposing marine mammals to potentially harmful underwater sounds. The SLFASWN and others were also concerned about recent marine mammal strandings in the Bahamas and in Florida waters.

Response: In response to the stranding of beaked whales in the Bahamas on March 15, 2000, the Navy and NMFS are investigating the transit of several ships using standard, hull-mounted sonar operations within normal frequency ranges, power outputs, and duty cycles, which are, respectively: 3.5 and 7.5 kHz, 235 dB (and lower) and ''pings'' of short duration (about one-tenth of a second or less duration on a standard duty cycle of 24 seconds). Because these sonars have signal and operational characteristics very different from explosives, and because an effective monitoring and mitigation program will be required for protecting marine mammals from injury or mortality from the shock trial, NMFS does not believe it is appropriate to delay issuance of an LOA until the investigation of these strandings is complete. In this action, the Navy has recognized that conducting the ship shock trial can result in a taking of marine mammals, and in that regard, applied for an authorization under the MMPA. It should be understood, that the taking of marine mammals, including mortality, can be authorized under the MMPA, provided the taking is small and would have no more than a negligible impact on affected marine mammal populations. Those determinations will be made in this document.

The cause of the unusual stranding of bottlenose dolphins off the coast of Florida last year remains unknown and under investigation at this time.

Comment 9: The NRDC, in a footnote, expresses concern that, if NMFS continues to consider TTS as being limited to Level B harassment, because the MMPA contains an exemption for scientific research activities that produce only Level B harassment, it might weaken, to an unknown extent, the application of the MMPA.

Response: Current NMFS regulations (50 CFR 216.44(b)) prohibit issuing General Authorizations for Level B harassment for all intrusive research on marine mammals. Intrusive research, which must be authorized under a marine mammal scientific research permit under section 104 of the MMPA, is defined in 50 CFR 216.3 to include the use of a stimulus (e.g., acoustics) directed at the animal.

Rulemaking Concerns

Comment 10: The CSI objects to the arbitrary decision not to address comments of the MMC and the Commonwealth of Virginia (Commonwealth) because ''they were limited to the Navy's DEIS for shock testing.'' CSI states that it is very interested in the NMFS reply to those comments, and, by the time they are available in the Navy's FEIS, the issue at hand may be in court. The MMC also expressed concern that the proposed rule did not address its comments on the Navy DEIS in its response to comments on the Advanced Notice of Proposed Rulemaking (ANPR).

Response: NMFS did not respond to the comments contained in the MMC and Commonwealth letters on the ANPR in the proposed rule document because they did not directly address issues in the proposed rule or the application; those organizations simply attached copies of the letters they submitted to the Navy on the Navy's DEIS without further elaboration or clarification. NMFS does not consider it appropriate to respond in the **Federal Register** to attachments to letters, unless the attachment supports concerns made in the actual letter to NMFS. Although, as a cooperating agency, NMFS may review and comment on the Navy's response to those letters in the FEIS, the responsibility to reply resides with the Navy, not NMFS.

Comment 11: The MMC believes that the proposed rule relies to a significant extent on the Navy's DEIS for its interpretation and justification, and requests that previous comments be considered as incorporated by reference, and addressed in the NMFS final rule, as well as the Navy's FEIS.

Response: As is normal procedure, NMFS has incorporated into its decision-making process all comments submitted on the NEPA document that accompanies the proposed action. In this case this includes the comments submitted by the MMC and other organizations and individuals on the Navy's DEIS, and the responses made by the Navy to these recommendations and concerns as provided in the Navy's recently-released FEIS. Because NMFS has adopted the Navy's FEIS as its own on this matter, these responses can be considered to also reflect NMFS' response. Where necessary, this document provides additional clarification on certain issues raised by the MMC in its March 30, 2000, letter.

However, NMFS clarifies for future reference that it will respond in the **Federal Register** only to comments provided directly to the Agency during the designated comment period that are relevant to the proposed action. Unless NMFS is the responsible Federal agency under NEPA, or is a co-sponsor (as opposed to being a cooperating agency) for the NEPA preparation, NMFS will not respond in the **Federal Register** to comments on NEPA documents prepared by other Federal agencies.

Comment 12: The EII believes that because scientific research is insufficient to judge environmental impact from loud, undersea noise events, it is premature to issue the rule. Additional scientific research must be carried out by the Navy and NMFS in order to address the unknown factors of adverse environmental impacts of noise on marine wildlife.

Response: While NMFS agrees that more scientific research would be desirable to assess impacts from explosive events on marine mammals, NMFS does not agree that the current information is insufficient to issue small take authorizations for this type of an activity. Recognizing the difficulty of directly studying impacts of explosives on live marine mammals, the reluctance of many researchers to risk harm to marine mammals, and the objections by some members of the public to allowing even non-intrusive research on marine mammals, researchers must use either surrogate species or deceased marine mammals. This information is provided in Appendices D and E of the Navy's DEIS and FEIS on this action. NMFS believes that the information contained in the Navy's application, and the Navy's FEIS on the USS WINSTON S. CHURCHILL, along with other information, provide the best scientific information available for making a determination of negligible impact on marine mammal species.

Comment 13: The HSUS expresses concern that nothing in the proposed rule restricts the use of 182 dB (re 1 uPa^2-sec) criterion for inducing TTS to impulsive sounds only. The HSUS requests that NMFS clarify that the criterion established for the USS WINSTON S. CHURCHILL shock test is for impulsive sounds only. The NRDC believes that the proposed rule adopts a new standard for impulse-related threshold shifts (TSs). The CSI believes the proposed rule ignores the distinction between impulse and continuous noise; repetitive impulse sounds have cumulative effects.

Response: See response to Comment 3. In general, NMFS recognizes two categories of sounds in the water, impulsive and intermittent/continuous. Depending upon the rise-time of the signal and its duration, an impulsive sound may be considered as an explosion. Use of the 182 dB (re 1 uPa^2-sec) as one of the two required criteria for determining onset of TTS applies only to those types of impulsive sounds that have the short-rise time indicative of an explosion; it does not apply directly, at this time, to other forms of repetitive impulse sounds (such as seismic airguns), wherein an animal's

hearing is not given sufficient time to fully recover. It also does not apply to intermittent/continuous sounds, such as the Navy's Surveillance Towed Array Sensor System Low Frequency Active (SURTASS LFA) sonar system. For repetitive impulse sounds that are not explosions, NMFS agrees with the scientists participating at the Mineral's Management Service's High Energy Seismic Survey (HESS) Workshop (MMS, 1999) and the NMFS Workshop on Acoustics, that they were apprehensive about levels above 180 dB re 1 uPa (root-mean-squared (rms)) with respect to overt behavioral, physiological, and hearing effects on marine mammals in general (MMS, 1999). It should be clarified here that the 180 dB (re 1 uPa (rms)) refers only to impulse sounds, not intermittent or continuous anthropogenic sounds. Also, as clarified at the 1998 NMFS Acoustics Criteria Workshop, the 180 dB (re 1 uPa (rms)) applies only to cetaceans; a 190 dB (re 1 uPa (rms)) level was established at that meeting for impulse sounds affecting pinniped (seals and sea lions) hearing. However, all parties recognized that the 180 dB (re 1 uPa (rms)) is only an interim criterion until such time as new information becomes available that indicates a different level to be appropriate.

Because the shock trial consists of 3–4 detonations each spaced a week apart, cumulative effects that might be anticipated with other impulse sounds are unlikely.

Comment 14: The HSUS notes that the best available scientific information on TTS in cetaceans (as well as pinnipeds) is both clearly preliminary and extremely limited in scope. Agencies should, therefore, limit its application and should not use it to establish a broad regulatory definition of Level B (acoustic) harassment.

Response: NMFS is in complete agreement with the comment. Use of the 12 psi peak-pressure and the 182 dB (re 1 uPa^2–sec) dual criterion should be limited, at this time, to single-impulse events, and not multiple-events. This was expressed in the shock trial proposed rule and previously in this document.

Comment 15: Several commenters requested NMFS to promulgate a separate proposed rule, subject to public comment and scientific scrutiny, that addresses a new standard for all marine mammal species for onset of TTS at 182 dB (re 1 uPa^2–sec).

Response: NMFS does not agree that separate rulemaking is needed before it can adopt levels for acoustic harassment. Because part of this rulemaking is the criteria NMFS proposes to use to determine levels of harassment and injury incidental to takings of marine mammals by the USS WINSTON S. CHURCHILL shock trial, it was fully available for public review and comment by the public and independent scientists at the proposed rule stage. While this document can be used as guidance for other maritime activities for determining whether an activity might result in a taking of a marine mammal (if that activity uses explosives), as will be demonstrated in this document, codifying such regulations would impede timely modification to adopt new scientific information whenever new data and information become available. For example, a sound pressure level (SPL) of 180 dB (re 1 uPa (rms)) has been generally accepted as a level (for impulse noise only) sufficient to protect marine mammals from anthropogenic noise, but only as an interim measure until additional data becomes available. Future research might indicate that this level was not sufficiently conservative to protect all species of marine mammals (or that it was overly conservative). If codified, NMFS would likely be delayed in the implementation of any new criteria until new amending regulations could be implemented (a minimum of 1 year). This is not warranted at this time because NMFS anticipates significant advances in this area in the near future. However, NMFS anticipates publishing its acoustic criteria for determining impacts from underwater noise on marine mammals shortly. Although this guidance will not be codified, it will provide the latest guidance to the affected public and governmental agencies and will be available for public review and comment.

Comment 16: The CSI objects to the use of multiple criteria in a final rule that is an energy-based TTS criterion of 182 dB (re 1 uPa^2–sec) and a 12 lbs/in2 (psi) peak pressure. Also, the HSUS does not understand the need for dual criteria. The HSUS finds it redundant and confusing and the CSI believes it will be confusing to future reviewers, as it provides no consistent scale between the two boundaries, unless the reviewer is fluent with appropriate mathematical formulas.

Response: The dual criteria were selected to provide the greatest protection for marine mammals by ensuring that future activities calculate the criterion that is most conservative for marine mammals. As explained in detail in Appendix E of the Navy's DEIS and FEIS, in most cases, the 182 dB (re 1 uPa^2-sec) criterion will be the determining factor. Therefore, while it may be difficult for nonprofessionals to calculate the appropriate ranges, acoustical scientists should have little difficulty making these calculations. NMFS believes that it would be appropriate for scientists to provide a clear explanation for reviewers on how they derived the appropriate TTS zones, using the dual criteria. The bottom line, however, is that the criterion that provides the greatest protection for marine mammals is the one that must by used by activity proponents for assessing impacts.

Comment 17: The CSI objects to NMFS' allowing such a variety of defined measurements in permit and LOA applications. Why does the CHURCHILL request use dB (re 1 uPa^2–sec) energy criterion instead of dB (re 1 uPa (rms)), as used in the SURTASS LFA sonar DEIS? Even if the technical distinction is a function of impulse versus continual sources, the scientific community has accepted an SPL of 180 dB (re 1 uPa @ 1 m) as an interim standard for human-caused noise that causes injurious marine mammal hearing threshold shift (TS), but only as an interim measure until additional data became available. Will the SURTASS LFA FEIS be modified to dB defined by energy, to maintain a consistent reference? Why isn't a consistent measure used to aid reviews?

Response: First, NMFS clarifies here that the accepted SPL is 180 dB (re 1 uPa (rms)) received level, not 180 dB (re 1 uPa @ 1 m), which references a source level. NMFS also clarifies that the 180 dB (re 1 uPa (rms)) SPL criterion has not been categorized as the level that causes an injury (or even a threshold shift in marine mammal hearing) from impulse noise, but is a consensus of some scientists and non-scientists that at some unknown SPL above that 180 dB (re 1 uPa (rms)) level, a marine mammal may incur a hearing impairment. This SPL criterion has also not been fully accepted for other types of noise, although it is currently being utilized by activities to delineate a safety zone for marine mammal protection. It is NMFS' intention, through rulemakings similar to this one, to replace this single SPL criterion, one that is not based on science, with science-based criteria, whenever feasible.

As described in the proposed rule, NMFS proposes to use a dual criterion for explosives, one for pressure and one for energy. For the energy criterion, NMFS and the Navy propose to use 182 dB (re 1 uPa^2-sec), cumulative energy flux in any 1/3 octave band above 10 Hz for mysticetes and above 100 Hz for odontocetes (and sea turtles). For the pressure criterion, the Navy and NMFS

propose using 12 psi peak pressure as suggested by Ketten (1995). Whichever criterion provides the greatest protection for marine mammals is the one that will be used during the shock trial.

The SURTASS LFA sonar rulemaking proposes to use a different criterion than either the dual criterion used in this document or the standard 180 dB (re 1 uPa (rms)). That Navy action and NMFS' proposed rule for a small take authorization for that activity use a criterion of a ''180-dB single-ping equivalent,'' which is the summation of the intensities for all received brief acoustic sounds into an equivalent exposure from one ping, which is always at a higher level than the highest individual ping received (66 FR 15375, March 19, 2001). This criterion is designed to take into account the longer duration of the LFA sonar signal (i.e., 60–100 sec).

Comment 18: The NRDC believes that the present rule establishes a criterion that, based on a single, problematic study, is substantially weaker than earlier criteria.

Response: NMFS believes that the current rulemaking provides significant recognition that marine mammal hearing can be affected by frequency, intensity and duration. Contrary to the commenter's belief, the dual criterion is based on extensive research and analysis (as described in Appendix E of the Navy's DEIS and FEIS), and contrary to the 180 dB (re 1 uPa (rms)) criterion, which while simple and understandable, is one that is not based on science and is recognized by all parties as only an interim measure until better criteria are developed. We believe that the dual criterion is an improvement for one type of anthropogenic noise.

In the small take authorization for the taking of marine mammals incidental to the detonation of conventional military explosives within the waters of the Outer Sea Test Range of the Naval Warfare Center, Pt Mugu, Ventura County, CA (59 FR 5111, February 3, 1994), the Navy and NMFS established a safety zone for the shock trial of the USS JOHN PAUL JONES at 180 dB (re 1 uPa) and a behavioral response zone at 160 dB. The rulemakings for the USS SEAWOLF and the USS WINSTON S. CHURCHILL have provided detailed information on why a behavioral response, outside of TTS, was not appropriate for a single-shot detonation. It should be noted however, that the USS JOHN PAUL JONES shock trial off Southern California established a safety zone based upon a SPL of 180 dB (re 1 uPa)(Chief of Naval Operations, 1993). The Navy calculated the 180 dB SPL would be at 8600 ft/1.4 nm (2621 m) from the detonation point at a depth of 50 ft (15.2 m) from the water surface and at 12,150 ft/2 nm (3703 m) at 1,000 ft (309 m) below the water surface. This distance is significantly less than the Navy's calculated zone for TTS for the USS WINSTON S. CHURCHILL shock trial. Although NMFS believes that the distances would vary somewhat for the USS WINSTON S. CHURCHILL shock trial due to physical parameters of the water at the Atlantic Ocean site, they provide support for NMFS adopting the dual criterion over one established for other forms of impulse noise. Even at maximum depth, the distance for an SPL of 180 dB (re 1 uPa (rms)) would likely remain within the safety zone established for the USS WINSTON S. CHURCHILL shock trial.

Comment 19: The HSUS and CSI are concerned because the rule actually proposed an SPL for the onset of TTS of 192 dB re 1 uPa at 1 m, recalculated as energy flux. They believe that this level is higher than previously recommended by the scientific community.

Response: Please refer to response to Comment 13. Also, a source level cannot predict impacts at various distances. Therefore, NMFS presumes that the reference should be for a received level which would be written ''dB re 1 uPa (rms).''

The evidence shows that for a tonal or broadband stimulus lasting more than a quarter second, onset TTS is better predicted by the total amount of energy in the signal than by any other metric. Thus, the current reference for inducing onset TTS (the lowest threshold shift (TS) measurable) with tonal or broadband sound is 192 dB (re 1 uPa^2-sec), cumulative energy flux at the recipient (not at 1 m from the source). It so happens that a 1 sec tone at 192 dB SPL contains exactly 192 dB (re 1 uPa^2–sec) of cumulative energy flux (because the metric's reference is 1 sec). A tone of 192 dB SPL lasting 2 seconds would contain approximately twice as much cumulative energy flux (i.e., 3 dB more) or 195 dB (re 1 uPa^2-sec), cumulative energy flux. Conversely, the SPL of a 2–second tone would have to be dropped to 189 dB SPL to deliver a total of 192 dB (re 1 uPa^2–sec) over the 2–second period. In other words, the 182 dB cumulative energy flux is approximately 1/10 the cumulative energy flux in the reference tonal signal of 1 sec at 192 dB SPL. This is explained in Appendix E of the Navy's FEIS.

Comment 20: The HSUS was unable to find one of the references used by NMFS because NMFS did not provide the full reference.

Response: The Schlundt *et al* (2000) research paper was not cited in the Navy's DEIS because that document had not been published by the time the DEIS was published. NMFS does not provide full references to cited documents in the **Federal Register** because it is NMFS policy to reduce the size of Federal Register documents to the extent practicable due to costs for publication. In lieu of complete citations for all references used, NMFS noted in the proposed rule that a list of references used in the document was available upon request.

Comment 21: The MMC notes that the rationale for using a 50–percent probability of eardrum rupture as a criterion for non-lethal injury, is not clear and appears to be based on data from terrestrial mammals, rather than marine mammals. Further, there is no indication as to why there is a 50–percent probability that the eardrums of different marine mammal species would rupture at the calculated distance or that the ruptures would heal without causing problems. A better explanation of, and justification for using this criterion should be provided.

Response: Terrestrial mammal and marine mammal auditory systems have similarities in structure and function (Ketten, 1995, 1998). There are no detailed experimental results from marine mammals upon which to base a quantitative analysis of the potential effects of a 10,000 lb (4,536 kg) charge detonation on marine mammal auditory systems. Ketten (1995, 1998) addresses these same issues. By using the results from controlled underwater explosion experiments on small terrestrial mammals (dogs and sheep), reasonable assumptions can be made concerning potential auditory system impacts to small marine mammals. Under identical assumed conditions, the Navy FEIS and Ketten (1995, 1998) are consistent in the assumed overall potential impacts to marine mammals.

Fifty-percent eardrum rupture was considered as a criterion for non-lethal injury because it is a standard, statistically meaningful measure that has been estimated in a variety of mammals (Ketten 1995, 1998). Further, it provides an indirect way to estimate the range for PTS, an auditory impact that has never been studied in marine mammals (in terrestrial mammals, 50 percent incidence of TM rupture is associated with 30 percent incidence of PTS). Estimated ranges for eardrum rupture probabilities less than 50 percent would be highly variable. Therefore, instead of estimating an outer

bound for eardrum rupture or calculating a gradient or probability curve, the Navy counts 100 percent of the animals in this range as ''injured'' even though the incidence of eardrum rupture would be less than 50 percent at this range and the incidence of PTS would be less than 30 percent. By considering 100 percent of all marine mammals within the 50 percent TM rupture zone as being injured, when there is a 50–percent probability of non-injury, NMFS believes that the Navy has accounted for all marine mammals that had even a 1 percent chance of incurring TM rupture. Also adding to the conservative nature of the injury calculations, marine mammals at depths other than where the effect is maximal would also be less vulnerable to eardrum rupture.

Comment 22: The MMC also notes that any use of the probability of eardrum rupture as a criterion for defining non-lethal injury appears to reflect a misunderstanding of underwater hearing. While an eardrum rupture could have little effect on hearing, the cochlea and hair cells could be severely damaged even if no rupture of the eardrum occurred. Thus an eardrum rupture is a questionable measure of acoustic injury in marine mammals.

Response: NMFS agrees. Because the criterion is based upon land mammals rather than marine mammals, and because TM rupture research has not been conducted on marine mammals, it is not the 50–percent TM rupture itself that is the criterion used, but the ''impulse'' in psi-msec that is associated with other impacts on the body. In this case, the energy flux density that causes either the 50–percent TM rupture or the impulse that causes slight lung hemorrhage is the real criterion. This is illustrated in figures D-9 and D-10 of Appendix D in the Navy's FEIS. NMFS believes this is conservative, even if it is based on terrestrial mammals because the hearing structures of marine mammals are probably more resistant to pressure (for diving) than are terrestrial mammalian ear structures. However, because the impulse estimated to cause slight lung hemorrhage was more conservative (i.e., had a greater range), it is slight lung hemorrhage that is the defining criterion used for determining injury in this action, not the energy flux density used for 50 percent TM rupture.

Marine Mammal Acoustic Impact Concerns

Comment 23: Several commenters noted that TTS in marine mammals results in minor injury at the cellular level. The NRDC argues that common usage of the word ''injury'' makes no distinction between temporary and permanent impacts. The NRDC also argues that there is evidence obtained through light and electron microscopy of swelling and vacuolization and of shortening of the stereocilia rootlets; evidence of depletion of synaptic bodies and associated vesicles; studies showing a buckling of cochlear pillar bodies and an uncoupling of stereocilia from the tectorial membrane.

Response: NMFS agrees that an injury should not be considered something else simply because it is temporary. However, the term used by NMFS in the proposed rule was impairment, which NMFS argues does not necessarily denote an injury. The source of the information encapsulated in this comment is from Liberman et al. (1987) regarding swelling, vacuolization and rootlet shortening, from Henry et al. (1995) regarding synaptic depletion-both as reported in Appendix E of the Navy's DEIS and FEIS and from Nordmann et al.'s (2000) research on chinchillas regarding pillar buckling and stereocilia uncoupling. Swelling, vacuolization, shortening and depletion were examined at TS levels associated with TTS and were deemed by the authors to be fully recoverable without the loss and replacement of tissue. Nordmann et al. (2000) examined animals at TS averaging 43 dB - levels over 40 dB are associated with slight PTS. However, both pillar cell buckling and stereocilia shortening detach the hair cell from the tectorial membrane in order to protect the hair cells from injury at the expense of a temporary loss of hearing sensitivity. That is, the buckling of pillar cells and shortening of stereocilia together function as a ''partially protective response'' (Nordmann *et al.*, 2000). In other words, pillar cells and stereocilia are designed to work this way, time after time. Therefore, buckling and shortening can be considered to be adaptations that protect the hair cells from injury, and are not injuries in and of themselves.

NMFS notes however, that whereas TTS does not result in cell destruction, even minor boat propeller strikes on manatees (a comparison used by the HSUS to indicate levels of injury from serious to non-serious) result in the destruction of cellular tissue which must be replaced if recovery is to occur.

Comment 24: The HSUS and the WDCS express concern over NMFS' use of the 182 dB (re 1 uPa^2–sec) criterion for both mysticetes and odontocetes. The HSUS notes that NMFS agrees that the SPL that would cause TTS in cetaceans by explosives has not been tested empirically on live cetaceans. The HSUS questions the appropriateness of using the Ridgway *et al.* (1997) results in the context of shock testing.

Response: The dual criterion was developed for this action as an estimate for impulsive waveforms from available tonal data, not for all waveforms. In the energy portion of the dual criterion, the specified energy in lower frequencies is estimated for mysticetes and in higher frequencies for odontocetes to accommodate for differences in the most sensitive frequencies. The only cross-species assumption made is that the amount of energy required for onset TTS will be similar in both odontocetes and mysticetes.

The first direct tests of explosives on cetaceans have recently been completed by Finneran *et al.* (2000). Those tests delivered 179 dB (re 1 uPa^2–sec) energy at about 10 psi to dolphins in a waveform that simulated a distant blast without inducing onset TTS. Finneran *et al.* (2000) found no TS in masked-hearing thresholds, defined as a 6-dB or larger increase in threshold over pre-exposure levels, had been observed at the highest impulse level generated (500 kg (1102 lbs) at 1.7 km (0.9 nm), peak pressure 70 kPa. Other work is in progress for another type of impulsive waveform that in many respects resembles that from a close explosive source with higher levels of energy and pressure.

Comment 25: The HSUS believes that while TTS may be temporary and fully reversible, animals suffering TTS may be further injured or killed due to a temporary inability to hear approaching ships or predators. The HSUS and the CSI believe that marine mammals may also become disoriented and strand. Because this carries with it the ''potential to injure (or even kill),'' the HSUS believes TTS should be categorized as Level A harassment. The MMC, while agreeing that defining TTS as Level B harassment is reasonable provided it does not make the affected animals vulnerable to predation or otherwise affect their survival or productivity, believes it is not inconceivable that temporary hearing impairment over a period of a few days could increase the potential for injury or death of an affected animal. If such were the case, TTS would have the potential for injury and would constitute Level A harassment.

Response: As stated in the ANPR, these second level impacts due to a marine mammal having a temporary hearing impairment cannot be predicted and are, therefore, speculative. However, the principal reason that second level impacts are not considered

in classification is that any Level B disruption of behavior could, with suppositions, be seen as potentially dangerous and, therefore, considered potential Level A harassment as well. Similarly, all Level A injuries could be seen as being accompanied by some disruption of behavior and therefore, Level B disturbances as well as Level A injuries. Such reasoning blurs the distinctions that the definitions of harassment attempt to make. The NMFS believes that Level B harassment, if of sufficient degree and duration, can be very serious and require consideration. For example, moderate TTS does not necessarily mean that the animal cannot hear, only that its threshold of hearing is raised above its normal level. The extent of time that this impairment remains is dependent upon the amount of initial TS which in turn depends on the strength of the received sound and whether the TTS is in a frequency range that the animal depends on for receiving cues that would benefit survival. It should be noted that increased ambient noise levels, due to biologics, storms, shipping, and tectonic events, may also result in short-term decreases in an animal's ability to hear as well as normal. For example, ambient noise in the Hawaiian Islands Humpback Whale Sanctuary increases seasonally in conjunction with an increase in humpback whale abundance, with no known impacts to these animals. NMFS scientists believe that marine mammals have likely adopted behavioral responses, such as decreased spatial separation, slower swimming speeds, and cessation of socialization to compensate for increased ambient noise or hearing threshold levels.

Ship strikes between whales and large vessels suggest that at least certain species of large whales do not use vessel sounds to avoid interactions and there is no indication that smaller whales and dolphins with TTS would modify behavior significant enough to be struck by an approaching vessel. Finally a hypothesis that marine mammals would be subject to increased predation presumes that the predators would either not be similarly affected by the explosion or would travel from areas outside the impact zone, indicating recognition between the signal of a single detonation at distance and potentially debilitated food sources. Therefore, NMFS does not believe the evidence warrants, as suggested by the MMC and the HSUS, that all (or an unknown percentage) of the estimated numbers of Level A (PTS) and Level B (TTS) harassment takes be considered as mortalities. What this document does do, however, is to consider that 100 percent of the marine mammals within the lethal zone (1.35 km/0.73 nm) would be killed, even though larger mammals may survive their injury from the shock wave, and that 100 percent of the marine mammals within the non-lethal injury radius would be injured, even though some animals may not be injured (depending upon the animal's size and depth in the water).

NMFS notes moreover, that TTS does not cause disorientation. Disorientation is caused by vestibular affects to the inner ear, not related to TTS (although an animal having vestibular effects could also suffer from TTS). For example, humans attending certain sport or music events may incur a TTS impairment due to the noise, but are not noted for being disoriented afterwards, unless caused by something other than noise.

Comment 26: The WDCS supports the previous comments by quoting Ketten (1998) that ''...sublethal impacts may ultimately be as devastating as lethal impacts, causing death indirectly through behavioral reactions, such as panic, as well as impaired foraging or predator detection, but the potential for this type of extended or delayed impact from any sound source is not well understood for any mammal.'' Also, the MMC notes that there is the possibility that repeated exposure to sounds capable of causing TTS increases the likelihood that animals would be injured.

Response: The quoted statement was taken out of context. The sentence preceding the one quoted by the WDCS, which clarifies the author's intent, reads: ''Sublethal impacts are those in which a hearing loss is caused by exposures to sounds that exceed the ear's tolerance to some acoustic parameter, i.e., auditory damage occurs from metabolic exhaustion or over-extension of one or more inner ear components.'' In the two quoted sentences, it is clear that Ketten (1998) did not distinguish between TTS and PTS at this point in her paper. NMFS and the Navy do not dispute that marine mammals suffering from acute, long-term, hearing impairment may have decreased survival rates, even though many dolphins and pilot whales thrive in social groupings, even with extreme hearing loss (called presbycusis). However, the rationale for not including TTS (and similarly, PTS) impairments as mortalities has been explained in this document previously.

While there is some recent research indicating that there is no relationship between repeated TTS exposures and an animal incurring a PTS injury, the science indicates that PTS can occur with repeated exposures of TTS without allowing animals to completely recover. However, the shock trial for the USS WINSTON S. CHURCHILL is a set of 3-4 detonations separated by a week between each detonation. Therefore, it is unlikely that animals would be in the TTS zone for more than a single detonation nor that any TTS impairment would not have recovered completely within that time. However, for multiple detonation activities that provide little time for TTS recovery, proponents would need to estimate, to the greatest extent possible, whether marine mammals are likely to be injured due to receiving multiple TTS impairments.

Comment 27: The NRDC is concerned regarding the use of the 182 dB (re 1 uPa^2–sec) criterion that it ignores the fact that a masking of 20–30 dB in the subject dolphins might result in lower TS levels. The NRDC notes that Schlundt *et al.* (2000) recommended caution in using this limited data to support other conclusions. The HSUS expresses similar concerns.

Response: NMFS agrees that a slightly lower TS might have resulted if masking had not been present. Finneran *et al.* (2000) acknowledge the possibility that larger TSs may have been observed without the masking noise. Finneran *et al.* (2000) reference Humes (1990) presentation of data for humans showing that exposure to broadband masking noise sufficient to raise pre-exposure thresholds 20 dB resulted in TTSs that were approximately 5 dB lower than those obtained without masking noise. However, at this time the data do not support the choice of any single dB level over any other level.

Comment 28: The NRDC also believes NMFS ignores the data showing a masked TTS of 8 dB, in one dolphin, at 172 dB (re 1 uPa^2–sec).

Response: According to the Navy, because of the large difference between that animal's TTS level and the other tested dolphins, that single bottlenosed dolphin was retested later and showed TTS levels similar to the other animals tested. That information is expected to be available shortly.

Comment 29: The CSI notes that NMFS has stated that ''scientists have noted that a range of only 15–20 dB may exist between onset TTS and onset of...PTS'' The CSI asks at what physical range from the detonation does the onset of PTS occur?

Response: The statement in the proposed rule was incomplete. The 15–20 dB difference refers to the difference between the SELs that cause the slightest TTS and onset PTS. Chinchillas experience full recovery

from up to 40 dB of TTS (Ahroon *et al.*, 1996) from impulsive noise. In the absence of comparable data for marine mammals, NMFS believes it is precautionary to define the onset of PTS for marine mammals to be 20 dB of TTS. This level would be conservative for chinchillas, and would likely be conservative for marine mammals. Regarding TS's themselves, the preponderance of data on terrestrial species indicates that the difference between an initial TS that results in slight TTS (onset TTS) and the initial TS that results in slight PTS (onset PTS) is about 40–60 dB. In other words, from the lowest initial TS that recovers (i.e., TTS) to the level at which recovery is incomplete by several dB (i.e., PTS), the difference is routinely found to be 40–60 dB of TS. These values are found not only with longer duration stimulation, but with repeated application of impulsive stimuli as well (Ahroon *et al.* 1996). The problem of determining the same values for marine mammals with their marine-adapted ears remains to be solved. Therefore, this remains an avenue for future investigation that NMFS encourages the Navy and others to undertake. However, because the onset of PTS in marine mammals would be expected to be quite variable dependent upon the ear structure of the mammalian group (mysticetes, odontocetes, pinnipeds) and species specific sensitivity, the health of the individual animal, and the characteristics of both the water and the acoustic source, there may not be a single value to establish for determining onset PTS. Therefore, NMFS has decided to reserve detailed discussion or use of this alternative methodology for estimating PTS for a future notice and comment rulemaking and has determined to use an alternative, simpler method for calculating a zone for non-serious injury to hearing for the shock trial of the USS WINSTON S. CHURCHILL. This method derives from human damage risk criteria (DRC) as well as clinical and experimental observations of PTS.

According to Richardson *et al.* (1995), the distances at which marine mammal auditory systems might be at risk for PTS from a single explosive pulse can be estimated based on extrapolations from human DRC. Based on the data presented by Richardson *et al.* (1995), PTS might be expected to occur within distances of about 1.7 nm (3.1 km) from the detonation point for a 10,000–lb (4,536–kg) charge. More relevant for marine mammals, Ketten (1995) hypothesized a PTS/TTS transition zone extending from about 0.9 km (0.5 nm) from the detonation point to 5 km (2.7 nm) from the detonation point for a 10,000–lb (4,536–kg) charge. This is illustrated in figures D-9 and D-10 of Appendix D in the Navy's FEIS. Based on Ketten's calculations, and the fact that shock wave intensity decays exponentially with distance, it would be reasonable to assume that PTS is unlikely to occur beyond the monitored buffer zone (3 nm/5.6 km) for the shock trial of the USS WINSTON S. CHURCHILL. Therefore, the zone between the range that has the potential to produce either the onset of slight lung hemorrhage or 50–percent TM rupture (usually slight lung hemorrhage is the more sensitive indicator), which is 1.22 nm/2.25 km from the detonation, and the outer edge of the buffer zone (3 nm/5.6 km) could be an area wherein marine mammals might incur a non-serious PTS injury. NMFS notes however, that because the Navy has calculated a take by injury wherein 100 percent of the marine mammals within the injury zone would be injured when in fact the incidence of eardrum rupture would be less than 50 percent at this range and the incidence of PTS would be less than 30 percent, there is no need to recalculate take by injury levels due to this slightly extended zone of possible slight injury to the ear.

Comment 30: The CSI continues that the Navy application shows a representative point of injury at 1.22 nm (2.25 km), defined as 25.3 psi-msec, or 175 Pa-sec. A representative point of harassment (TTS) at 17.7 nm (32.8 km) defines the outside of the TTS envelope, where the received level is 182 dB energy. If onset TTS occurs as far out as 17.7 nm (32.8 km) does this imply that the detonations lose only 20 dB over 16.5 nm (39.6 km), from a point somewhere inside the ''slight lung hemorrhage injury'' zone?

Response: NMFS is unaware of the calculations used by the commenter to determine that detonations lost 20 dB over 16.5 nm (39.6 km) so it is unable to respond directly to the comment. However, it should be noted that the stated distance for onset-TTS should not be taken as an implicit statement about the rate of signal loss out to that distance, but rather as one about the worst-case propagation distances and animal depths that insures that all affected marine mammals are counted. The Navy calculated the farthest extent of TTS harassment for odontocetes at Norfolk at 17.7 nm (32.8 km) and 23 nm (42.6 km) for mysticetes. However, the preferred location for the shock trial is Mayport, FL where those maximum ranges for TTS harassment are 13.6 nm (25.2 km) and 15.0 nm (27.8 km) respectively. These ranges are depth dependent (see table in response to comment 3) and distances were based on whichever of the dual criteria provided the greatest distance for calculating TTS.

Comment 31: The HSUS requested clarification of the discrepancy between the use of 182 re 1 uPa^2–sec used in the proposed rule and the Navy DEIS'' use of the term 182 dB re uPa^2–sec.

Response: Both documents should read 182 dB re 1 uPa^2–sec. The two units are interchangeable and mean the same thing once a reader recognizes that the standard reference used in the document is for the water standard (re 1 uPa^2–sec) and not the in-air standard (re 20 uPa^2–sec). Because NMFS processes small take applications for both in-air and in-water incidental takings, it prefers to use the full reference to reduce confusion. This has been noted recently making faulty comparisons between loud underwater noise source levels with received levels of familiar terrestrial noise sources without noting that different standards were being used for each and compensating for those differences (see Chapman and Ellis (1998) for more information).

Comment 32: The WDCS cite Ketten (1998) that ''Sharp rise-time signals have been shown also to produce broad spectrum PTS at lower intensities than slow onset signals both in air and in water.'' and ''Although technically a pressure induced injury, hearing loss and the accompanying gross structural damage to the ear from blasts are more appropriately thought of as the result of the inability of the ear to accommodate the sudden, extreme pressure differentials and over-pressures from the shock wave.''

Response: Neither NMFS nor the Navy disagree with these statements. The Ketten (1998) document is one of the primary references cited in Appendix D of the Navy's DEIS and FEIS.

Comment 33: The WDCS also cites statements by Croll *et al.* (1999) that baleen whales could suffer temporary auditory damage at noise levels as low as 120 dB and, secondly, that physiological effects could occur well before 180 dB. The WDCS believes that NMFS and the Navy have totally disregarded these statements.

Response: Although NMFS was unable to verify the statements directly to the reference, these dB levels apparently derive from Richardson *et al.*(1995) for effects on marine mammals extrapolated from human DRC and from work done by Malme *et al.*(1983, 1984, 1988). For reasons explained previously

in this document, one must consider duration of the signal and the type of noise (impulse or intermittent/continuous) before making generalities on impacts based solely on an SPL.

Comment 34: The HSUS uses the Kastak *et al.* (1999) paper on three species of pinnipeds to support a more precautionary approach to noise standards than suggested by Ridgway *et al.* (1997).

Response: Kastak *et al.* (1999) documented TTS in three species of pinnipeds exposed to varying levels of octave band noise (OBN) for periods on the order of 20 minutes. OBN center frequencies from 100 to 2,000 Hz were used in these tests, and the results presented in the paper pooled the data from each exposure frequency. The results indicate onset of TTS at mean values of 137, 150, and 148 dB (re 1 uPa) for the harbor seal, sea lion and elephant seal, respectively, for 20– to 22–minute exposures of OBN. Because of the pooling effect, these data also have variations around the mean on the order of -5 to +10 dB. As described in the account of the test, these levels can be considered to represent the lower level for onset of TTS for a 20–minute signal. However, NMFS notes that because TTS may result from a brief exposure to a loud sound, intermediate exposure to a sound of intermediate loudness, or prolonged exposure to a faint sound, sound duration and intensity can be considered to trade off with each other in causing TTS, as is indicated in the work by Kastak *et al.* (1999). This is one reason why NMFS advises caution in the widespread advocation for the use of the 180 dB (re 1 uPa (rms)) standard for noise sources other than impulse noise.

Comment 35: The HSUS disagrees with NMFS' concurrence of the Navy's use of the human auditory DRC for determining criteria for marine mammals. The HSUS notes that in the Navy's SURTASS LFA sonar DEIS, the Navy established a safe received level for continuous LF sound for humans at 145 dB (re 1 uPa (rms)), but at 180 dB (re 1 uPa (rms)) for marine mammals. The HSUS, therefore, finds it inconsistent and illogical for NMFS to then claim human auditory DRC are an appropriate standard for marine mammals and if they do so, NMFS and the Navy should consistently apply the most conservative human standards.

Response: In this action, NMFS and the Navy do not use quantitative human DRC to establish criteria for TTS in marine mammals, its only use in this document was to provide support for the qualitative determination that TTS should not be considered as an injury.

In the SURTASS LFA sonar action, the Navy did not establish the 145 dB human diver criterion based on human DRC but on a comprehensive study conducted by the Navy in conjunction with a consortium of university and military laboratories (Navy SURTASS LFA Sonar Technical Report 3, 1999). These two acoustic values mentioned by the commenter for intermittent noise represent different criteria: psychological aversion from direct measurements with human divers (145 dB) and the exposure level at or above which all marine mammals are evaluated (180 dB) for impulse noise. The level of potential effects for humans is lower than that for marine mammals primarily because of the inherent physiological and psychological differences. A human diver is in an unnatural, hazardous and unpredictable environment when diving. Breathing compressed air introduces special risks for humans underwater. The potential for a startle response that could have serious consequences is much greater for humans underwater than for a marine mammal whereas marine mammals are in their natural habitat, their ear structure are pressure-adapted to their environment, and they are accustomed to hearing LF sounds underwater.

Comment 36: The HSUS is unable to reconcile the statement that ''[t]he criteria for differentiating TTS and PTS zones are not species and media-dependent and may be strongly influenced by the health of the ear'' with the extrapolation of human DRC and a single study's (i.e., Ridgway *et al.* (1997)) results to all marine mammals and sea turtles.

Response: As mentioned in the previous comment, the Navy's DEIS and FEIS do not extrapolate specific values from human DRC. NMFS has addressed the methodology for differentiating TTS between mysticetes and odontocetes earlier in this document. Given that there are data on two marine-adapted cetaceans, until additional anatomical or other data become available, these estimates are better than quantitative generalizations from the data of terrestrials or longer chains of extrapolation from general models.

Appendix E Concerns

This section contains responses to comments on Appendix E of the Navy's DEIS that have not been addressed previously in this document.

Comment 37: The HSUS and the CSI note that Appendix E of the Navy's DEIS acknowledges that PTS in humans can be induced by ''chronic exposure to nonpainful SPLs and...PTS may not be detected until later in life.'' This, HSUS notes, is highly relevant to the work done on marine mammals. If chronic exposure to non-painful sounds can cause PTS, which may not be detected until long after exposure to the sounds, then the reliance on behavioral indicators alone for harassment criteria for marine mammals seems questionable. The HSUS understands that this is why the Navy has chosen TS criteria for Level A and Level B harassment, but the speculative nature of these criteria for all marine mammals is also highly questionable.

Response: First, it should be recognized that the quoted sentence means that the detection of PTS long after exposure was the result of not having looked for the PTS a short time after exposure, not that PTS lay hidden or dormant and arose long after the exposure. Second, ''chronic exposure'' means long-term exposure, a condition that is not relevant to this shock trial (or to other single exposure explosion events). Please refer to the response to comment 34 regarding duration of sounds.

The USS SEAWOLF and the USS WINSTON S. CHURCHILL EISs are the first to date that spell out in detail with full references to the primary literature, the complicated series of questions that must be answered to put marine environmental impact assessments from explosives on a systematic and rational, rather than a speculative, footing.

Comment 38: The WDCS noted that Appendix E states that TTS studies with impulsive stimuli have been conducted, but the results are not yet available. Would the results of these studies not have been considered important here to increase our understanding of such activities?

Response: This research has been completed, published and discussed previously in this document. Other relevant research is in progress. Please refer to the response to Comment 24 on the findings of Finneran *et al.* (2000).

Comment 39: The HSUS finds questionable the extrapolation of the results from Ahroon *et al.* (1996) on chinchillas to generate a broad concept about TTS.

Response: The results of the cited study are discussed in a very extensive review and integration of other studies of other species. In particular, the stated conclusion rests more firmly on the work of Liberman *et al.* (1987) at the electron microscopic level of analysis with the highly systematic study of Ahroon *et al.*(1996) lending support at the light microscope level of analysis. Other studies of various types on various species are also cited that

directly and indirectly support the findings of Lieberman et al. (1987) and Ahroon et al. (1996).

Comment 40: The HSUS does not agree with Appendix E's broadly extrapolating the results from Ridgway et al.(1997) as a cautious use of data. The HSUS does not consider these results to be ''good'' scientific information for marine mammals other than bottlenose dolphins. Given the many caveats that the Navy includes in its discussion of hearing thresholds, the HSUS fails to see how it can then conclude that broadly extrapolating the data from the Ridgway study for management purposes affecting all marine protected species is cautious.

Response: The commenter fails to recognize the wealth of supporting research and discussion contained in Appendix E, in addition to the work by Ridgway *et al.*(1997). Since the determination of levels of impact derived from the analysis contained in Appendix E is far more conservative than the use of a single SPL criterion recommended by several commenters as an alternative, NMFS believes that the extrapolations can be considered cautious. As a result, NMFS is able to conclude that the information contained in this document and other supporting research is the best scientific information available on the subject.

Comment 41: The HSUS strongly disputes the assumptions made to conduct the analyses for calculating TTS impact zones are conservative.

Response: NMFS does not concur. NMFS believes the analysis contained in the Navy's DEIS (and FEIS) uses a series of extremely conservative assumptions regarding propagation-the water depth of greatest propagation in each possible test area, the animal depth of highest pressure or energy regardless of each species' preference, highly reflective boundaries (bottom and surface) and the sound velocity profile of greatest propagation. In other words, the worst case propagation contours were used to derive the longest possible distance and thus, the greatest possible number of animals of each species were subsumed in the count. The basic metrics of pressure and energy used in the analysis were derived as described in Appendix E with a series of conservative assumptions. As explained in that document, even though new data continues to emerge and refinements will inevitably modify estimates up or down by small amounts, the overall series of assumptions and their applications allow for some error while still remaining conservative in their estimates.

LOA Concerns

Comment 42: The MMC notes that not all marine mammal species that might be taken incidental to the shock tests are included in the proposed authorization. Inasmuch as it is unlikely that observers will be able to detect and identify all marine mammals within the vicinity of the test site, the MMC questions whether the applicant will be able to ensure compliance with this provision.

Response: The paragraph in the proposed regulations cited by the MMC is a standard paragraph in all LOAs and IHAs to ensure that the list of those species expected to be taken is as complete as possible. Unless commenters provide NMFS with additional information on those marine mammal species that it suspects might be within the shock test areas that have not been included in the Navy's application, NMFS must rely on its expertise and from the list of marine mammals described in the Navy application and DEIS. The information provided to NMFS was obtained from several aerial surveys and other sources, including seasonal distribution, and is believed to be the best scientific information available. If a marine mammal is taken that is not authorized, then the applicant is considered to be in violation of the conditions of the LOA. If the aerial observers sight and identify a marine mammal of an unauthorized species, then the shock test must be delayed to ensure that a taking does not occur. NMFS has consulted with the Navy to ensure that the list is as complete as possible.

It should be noted that the list of species expected to be taken incidental to the shock trial has been modified in this document because the Navy's FEIS has determined that the Mayport FL site is the preferred alternative. As a result, marine mammal species found in the Gulf of Mexico, and not off the east coast of Florida, have been removed from the list.

Comment 43: The MMC suggests that NMFS advise the applicant that, despite the issuance of the requested LOA, there is the possibility that conducting the shock tests as planned might constitute a violation of the MMPA and encourage the applicant to expand its request to include all marine mammal species that potentially could be taken.

Response: Please see previous response. NMFS and the Navy are unaware of any species of marine mammals that have any potential of being in the offshore waters off Mayport, FL during the period between May and September that have not been included in this document.

Navy Application Concerns

Comment 44: The HSUS notes that the Navy application cites that there were no mortalities or serious injuries detected during the shock trial of the USS JOHN PAUL JONES. The HSUS is concerned by the Navy's (and NMFS') proclivity for maintaining that absence of evidence is evidence of absence.

Response: That no mortalities or serious injuries were detected by the monitoring program during and after the USS JOHN PAUL JONES shock trial is simply a statement of fact. NMFS views this statement, made after extensive aerial and boat surveys after each detonation to locate marine mammals, as different from similar statements made by others when there is not a concerted effort to detect ''takes'' during an activity. In that context, NMFS agrees with the commenter, noting that there is a potential for marine mammal mortality and injury by this action, and for that reason, the Navy has requested a small take authorization under the MMPA.

Comment 45: The HSUS questions the validity of the Navy's assumption of random spatial distribution of groups when scientific literature indicates that cetacean groups often clump around vital resources which are not always randomly encountered or distributed.

Response: The random distribution of groups is a conservative assumption. If cetacean groups are clumped, the probability of zero groups in the Safety Range will be higher than calculated values. In other words, the probability of encountering a Safety Range with no cetacean groups would be increased. As noted in Appendix C of the Navy DEIS, ''The assumption of an approximately random distribution is reasonable for individual turtles and for mammal groups (obviously not for individuals, which are highly aggregated). To the extent that groups are distributed non-randomly, i.e., aggregated, the probability of zero will be underestimated by the Poisson distribution. In other words, if groups are themselves clustered together, then the probability of encountering zero groups in a given Safety Range-sized area will be higher than predicted by a random model. There is considerable evidence that marine mammal groups and sea turtles are not randomly distributed but are associated with certain oceanographic features. For example, cetacean densities are higher inside cold core rings and in the confluence zones between warm and cold core rings (Davis *et al.*, 2000); sea turtles have temperature preferences (Coles, 1999) and are concentrated

inshore of the Gulf Stream western wall (Fritts *et al.*, 1983). However, as discussed in Section 5.0 of the Navy's DEIS and FEIS, test site selection would use satellite imagery and aerial surveys to avoid areas where marine mammals and turtles are highly concentrated. Therefore, the assumption of random distribution is reasonable, especially for comparing among test areas since the same assumption is applied to all three test areas.

Mitigation and Monitoring Concerns

Comment 46: Given the analysis in the LOA application of the proposed testing sites, the HSUS believes that the Pascagoula (site) exhibits the ''best'' profile for minimal impact to marine life.

Response: NMFS notes that under NEPA, the Navy must assess impacts on the total human environment, not solely on impacts to marine mammals as illustrated in a table estimating the total number of marine mammal takes anticipated at the three marine sites identified as alternative locations in the Navy's application. The choice of site locations was more fully addressed in the Navy's DEIS and FEIS. In the FEIS, the Navy determined that the Mayport site provided the best location for its needs and the least overall impact to the environment. It will be up to the Navy in the development of its Record of Decision to determine the location for the shock trial.

Comment 47: The SLFASWN believes that mortality and injury will occur and that it will occur largely unobserved. Also the ''carnage'' will occur slowly over a period of time.

Response: While NMFS agrees that there is some potential for mortality and injury of marine mammals by the shock trial, NMFS does not agree that it will occur largely unobserved over a period of time. The calculations conducted by the Navy, as explained in detail in its DEIS and FEIS, indicated that the Mayport FL site may result in up to 4 mortalities and 6 injuries. As explained elsewhere in this document, the Navy believes that this level is likely an overestimate of takings that will occur during the 4–week shock trial. NMFS concurs. In addition, without further clarification by SLFASWN on its concerns on the effectiveness of the monitoring program, NMFS is unable to concur that mortality and injury will go on unobserved. NMFS believes that post-detonation aerial and surface monitoring, and coordination with the local stranding networks, as described in the Navy application, will be capable of detecting injured or dead marine mammals to the greatest extent practicable.

NEPA, ESA and Executive Order (E.O.) 12866 Concerns

Comment 48: The ACS expresses concern over whether NMFS, in its self-described capacity as a ''cooperating'' rather than an ESA-required ''consulting'' agency, is properly performing its mandated role as the gatekeeper of the MMPA. The ACS contends that NMFS, by this action, is abdicating its responsibility to uphold national environmental policy and is, in fact contributing to the degradation of the marine environment rather than protecting it.

Response: NMFS disagrees that it is not upholding its responsibilities under the MMPA, the ESA, and NEPA. NMFS has responsibilities under all three statutes and has met those responsibilities through a program of cooperation and consultation as required under 40 CFR 1501.6 which implements NEPA, section 7 of the ESA, and section 101(a)(5)(A) and other sections of the MMPA. Under the ESA, NMFS concluded consultation with the Navy on this activity on October 10, 2000.

Comment 49: The NRDC believes that NMFS is justifying the proposed rule because of the benefits of the information that the Navy would be required to provide on the effects on the marine environment, particularly marine mammals.

Response: NMFS simply provides in the proposed rule a summary of costs and benefits of the proposed action in compliance with E.O. 12866. NMFS' responsibility is to make a determination of the impacts of an activity on marine mammals and whether or not that impact is negligible; determinations are not made based on the economic benefit of the activity.

Other Concerns

Comment 50: The HSUS contends that the acoustic criteria, discussed previously in this document, were not proposed for public review in the proposed rulemaking governing the taking of marine mammals incidental to the shock trial of the USS SEAWOLF.

Response: While the commenter is correct, it should be understood that the preamble to a rulemaking cannot discuss all aspects of an application and proposed authorization, and often refers to either the application, a NEPA statement, or both for additional information. Therefore, it is important for reviewers to also review the accompanying application and any documents noted as being available for review. However, for the USS SEAWOLF proposal, the proposed rule did not mention using the 182 dB (re 1 uPa^2–sec) criterion because the Navy application and the proposed rule were published prior to the availability of the Ridgway *et al.* (1997) research paper. Based, in part by a concern raised by NMFS in a letter (October 9, 1996) to the Navy regarding its criterion of ''acoustic discomfort'' for Level B harassment, the U.S. Navy convened a scientific working group to review and revise Appendix E of the USS SEAWOLF DEIS. The FEIS for the USS SEAWOLF, with the revised Appendix E, was released in May, 1998. A similar concern on the Navy's use of ''acoustic discomfort'' to characterize Level B harassment was also raised by the MMC in its letter to NMFS on September 16, 1996, in response to the proposed rule. NMFS' response to the MMC concern was then addressed in the final rule for the SEAWOLF small take authorization, noting the revision from using only a pressure-based criterion to using both a pressure-based criterion and an energy-based criterion. However, because this was a final rulemaking, the USS WINSTON S. CHURCHILL small take authorization rulemaking provides the public with the first notice and opportunity for comment on using the dual criterion of 182 dB (re 1 uPa^2–sec) and 12 psi criteria for explosive events. As noted previously, this rulemaking is being promulgated under section 101(a)(5) of the MMPA and the Administrative Procedure Act.

Comment 51: In concluding its letter, the HSUS notes, among other items previously addressed in this document, that the preliminary nature of the information provided by the Navy and NMFS is insufficient justification for abandoning truly precautionary acoustic standards for harassment of 140–160 dB re 1 uPa at 1 m.

Response: A source level (dB re 1 uPa at 1 m) cannot predict impacts at various distances. Therefore, NMFS presumes that the HSUS is referring here to a received level (i.e., dB re 1 uPa (rms)). The rationale for not recognizing a behavioral response by marine mammals (other than those resulting from TTS) has been addressed in response to comments 23 and 25. NMFS cautions against using acoustic standards without reference also to the type of noise (e.g., impulse, intermittent, continuous), the frequency of the sound, and the duration of the signal. Consideration should also be given to its oceanic context (e.g., Arctic, inshore, offshore waters).

Comment 52: The SLFASWN expresses concern over the increasing

number of acoustic programs occurring in the water simultaneously and wants to know if it was possible to know which other tests might have occurred in the last 15 months.

Response: NMFS does not believe that the number of acoustic programs are increasing substantially, only that these programs are coming to the attention of the public. However, even if all these activities were known, NMFS believes that this would make up only an extremely small percentage of the anthropogenic noise in the ocean. Larger, more persistent, anthropogenic noise sources include shipping, seismic surveys, oceanographic research, and, in certain areas, recreational boating. Cumulative impacts from noise in the vicinity of the proposed shock trial is discussed in the Navy's FEIS on this subject.

Description of Habitat and Marine Mammals Affected by Shock Testing

A description of the U.S. Atlantic environment, its marine life and marine mammal abundance, distribution and habitat can be found in the Navy's DEIS and FEIS on this subject and is not repeated here.

Affected Marine Mammals

A summary of the marine mammal species found in the Mayport FL area is presented here. A complete list of potentially affected marine mammal species can be found later in this document. For more detail on marine mammal abundance, density and the methods used to obtain this information, reviewers are requested to refer to either the Navy application or the Navy's FEIS. Additional information on Atlantic and Gulf coast marine mammals can be found in Waring *et al.* (1999 and 2001).

Up to 27 marine mammal species may be present in the waters off Mayport, FL, including five species of mysticetes and 22 species of odontocetes. Mysticete whales are very unlikely to occur at Mayport during the May through September time period. Odontocetes may include the sperm whale, dwarf and pygmy sperm whale, four species of beaked whales, and 15 species of dolphins and porpoises. These 22 species are listed in 50 CFR 216.151(b).

Potential Impacts to Marine Mammals

Mortality and Injury

Potential impacts to several marine mammal species known to occur in these areas from shock testing include both lethal and non-lethal injury, as well as harassment. Marine mammals may be killed or injured as a result of the explosive blast due to the response of air cavities in the body, such as the lungs and bubbles in the intestines. Effects are more likely to be most severe in near surface waters above the detonation point where the reflected shock wave creates a region of negative pressure called ''cavitation.'' This is a region of near total physical trauma within which no animals would be expected to survive. Based on calculations in Appendix D of the Navy's DEIS or FEIS, the maximum horizontal extent of the cavitation region is estimated to be 683 m (2,240 ft). This region would extend from the surface to a maximum depth of about 23 m (77 ft). A second criterion for mortality is the onset of extensive lung hemorrhage. Extensive lung hemorrhage is considered debilitating and potentially fatal. Suffocation caused by lung hemorrhage is likely to be the major cause of marine mammal death from underwater shock waves. The estimated range for the onset of extensive lung hemorrhage to marine mammals varies depending upon the animal's weight, with the smallest mammals having the greatest potential hazard range. The range predicted for a small marine mammal (e.g., a dolphin calf) is 1.35 km (0.73 nautical miles (nm)) from the detonation point. For estimating the impact from the detonation(s), NMFS and the Navy presume that 100 percent of the marine mammals within this radius would be killed, even though larger mammals may survive their injury from the shock wave.

NMFS and the Navy have established a dual criteria for determining non-lethal injury, the peak pressure that will result in: (1) The onset of slight lung hemorrhage, or (2) a 50-percent probability level for a rupture of the tympanic membrane. These are injuries from which animals would be expected to recover on their own. The range predicted for the onset of slight lung hemorrhage is 2.25 km (1.22 nm). The range predicted for 50 percent probability of eardrum TM rupture varies with the mammal's depth in the water column; the highest value being 2.16 km (1.17 nm) for a mammal at a depth of 335 m (1,100 ft). The criterion with the greater range (in this case, onset of slight lung hemorrhage) was used to estimate the number of potential non-lethal injuries. It is presumed that 100 percent of the marine mammals within this radius would be injured.

However, as noted previously, the mortality calculation based on extensive lung hemorrhage presumes that 100 percent of the animals within a radius of 1.35 km (0.73 nm) would be killed. While all animals within this radius are assumed to be killed, in reality some are unlikely to be even injured.

In addition to a non-lethal injury zone, NMFS has described in this document a method for calculating a zone of slight injury to the ear wherein marine mammals might incur a slight PTS injury. This zone is based on Ketten (1995, 1998) wherein a PTS/TTS transition zone has been hypothesized extending from about 0.9 km (0.5 nm) from the detonation point to 5 km (2.7 nm) from the detonation point for a 10,000–lb (4,536–kg) charge. This is illustrated in figures D-9 and D-10 of Appendix D in the Navy's FEIS. Based on Ketten's calculations, and the fact that shock wave intensity decays exponentially with distance, it is reasonable to assume that PTS is unlikely to occur beyond the monitored buffer zone (3 nm/5.6 km) for the shock trial of the USS WINSTON S. CHURCHILL. Therefore, the method described by NMFS considers the zone between the range that has the potential to produce impulse levels for causing either the onset of slight lung hemorrhage or the energy flux density to produce 50 percent TM rupture, which is 1.22 nm/2.25 km from the detonation, and the outer edge of the buffer zone (3 nm/5.6 km) to be an area wherein marine mammals might incur a non-serious PTS injury. NMFS notes however, that because the Navy has calculated a take by injury wherein 100 percent of the marine mammals within the injury zone would be injured when in fact the incidence of eardrum rupture would be less than 50 percent at this range and the incidence of PTS would be less than 30 percent, there is no need in the case of the USS WINSTON S. CHURCHILL to recalculate take by injury levels due to this slightly extended slight injury zone.

Finally, the Navy believes it is very unlikely that injury will occur from exposure to the chemical by-products released into the surface waters, and no permanent alteration of marine mammal habitat would occur.

Incidental Harassment

NMFS has described TTS as an example of one form of harassment (60 FR 28379, May 31, 1995). TTS is a change in the threshold of hearing (the quietest sound an animal can hear), which could temporarily affect an animal's ability to hear calls, echolocation sounds, and other ambient sounds. As such, it could result in a temporary disruption of behavioral patterns, as specified in the statutory definition of Level B harassment.

Since the small take authorization and Navy's FEIS for the USS SEAWOLF shock trial (63 FR 66069, December 1, 1998), the Navy has conducted an extensive analysis of the scientific literature, producing a good perspective on the physiological effects of TTS, as well as its use in human DRC by the Occupational Health and Safety Administration and in the National Institute for Occupational Safety and Health's (NIOSH) Criteria for Recommended Noise Standard (NIOSH, 1998). The best research to date indicates that the distortion and dysfunction of sensory tissue observed during TTS are only temporary and fully reversed upon recovery (i.e., occasional TTS produces no permanent tissue damage to the ear, only the temporary nondestructive impairment of tissue that fully recovers). As described in detail earlier in this document, this type of temporary nondestructive impairment as well as the use of TTS in human DRC are the scientific basis for no longer considering TTS as Level A harassment. Therefore, NMFS and the Navy concur that an impairment of hearing-related behavior during periods of TTS is the most reliable and meaningful estimate of Level B harassment for explosive detonation events.

Based upon information provided in the Navy's application for a small take authorization and in greater detail in Appendix E of the Navy's FEIS, a dual criterion for Level B acoustic harassment has been developed: (1) an energy-based TTS criterion of 182 dB re 1 uPa^2–sec 182 dB (re 1 uPa^2–sec), cumulative energy flux in any 1/3 octave band above 10 Hz for mysticetes and above 100 Hz for odontocetes (and sea turtles) derived from experiments with bottlenose dolphins (Ridgway *et al.*, 1997; Schlundt *et al.*, 2000); and (2) 12 psi peak pressure cited by Ketten (1995) as associated with a ''safe outer limit for the 10,000 lb (4,536 kg) charge for minimal, recoverable auditory trauma'' (i.e., TTS). The harassment range therefore is the minimum distance at which neither criterion is exceeded.

Using the 182 dB (re 1 uPa^2–sec) criterion, the Navy calculated separate ranges for odontocetes and mysticetes based on their differing sensitivity to low frequency sounds. For those odontocetes which are ''high-frequency specialists,'' all frequencies greater than or equal to 100 Hz were included. For mysticetes, which are ''low-frequency specialists,'' the frequency range was extended down to 10 Hz. Water depth is also an important factor in calculating harassment ranges. However, regardless of water depth, the Navy chose the highest values for TTS harassment ranges. Expected numbers of marine mammals within these radii (and thereby potentially receiving a TTS harassment impact) were calculated using the mean densities for the species expected in each area, and adjusting those estimates to account for submerged (undetectable) individuals. These ranges are as follows:

Water Depth (ft/m)	600/183	1200/366	2,300/701
Odontocetes (nm/km)	7.2/13.3	11.0/20.4	13.6*/25.2
Mysticetes (nm/km)	13.0/24.1	13.0/24.1	15.0/27.8

* determined by the 12 lbs/in^2 criterion

Estimated Level of Marine Mammal Takings

While the Navy does not expect that any lethal takes will result from these detonations (because of mitigation measures taken), calculations indicate that the Mayport site has the potential to result in up to 4 mortalities, 6 non-serious injuries, and 2,885 takings by harassment.

Mitigation and Monitoring Measures

The Navy's proposed action includes mitigation and monitoring that would minimize risk to marine mammals and sea turtles. These mitigation and monitoring measures are as follows:

(1) Through pre-detonation aerial surveys, the Navy will select a primary and two secondary test sites within the test area where potentially, marine mammals and sea turtle populations are the lowest, based on the results of aerial surveys conducted one to two days prior to the first detonation;

(2) Pre-detonation aerial monitoring will be conducted on the day of each detonation to evaluate the primary test site and verify that the safety range and buffer zone are free of visually detectable marine mammals and other critical marine life. If marine mammals are detected in the primary test area, the Navy will survey the secondary areas for marine mammals, and may move the shock test to one of the other two sites;

(3) Independent marine mammal biologists and acousticians will monitor the area visually (aerial and shipboard monitoring) and acoustically (by deploying sonobuoys) before each test and postpone detonation if (a) any marine mammal, sea turtle, large sargassum raft or large concentration of jellyfish is visually detected within a safety zone of 3.7 km (2.0 nm), (b) any marine mammal is acoustically detected within a safety zone of 4.16 km (2.25 nm), or (c) any large fish school, or flock of seabirds is detected within a safety zone of 1.85 km (1 nm);

(4) The area will be monitored visually (aerial and shipboard monitoring) and acoustically (by deploying sonobuoys) before each test and detonation will not occur if any marine mammal or sea turtle is within a buffer zone of an additional 1.85-km (1.0-nm) buffer zone, unless the marine mammals are on a course within the buffer zone that is taking them away from the 3.7–km (2.0nm) safety zone. A detonation will not occur if a listed marine mammal is detected within the buffer zone, and subsequently cannot be detected, until sighting and acoustic teams have searched the area for 2.5 hours (approximately 3 times the typical large whale dive duration). If a North Atlantic right whale is seen, detonation will not occur until the animal is positively relocated outside the buffer zone and at least one additional aerial monitoring of the safety range and buffer zone shows that no other right whales are present;

(5) Detonation will not occur if the sea state exceeds 3 (i.e., whitecaps on 33 to 50 percent of surface; 0.6 m (2 ft) to 0.9 m (3 ft) waves), or the visibility is not 5.6 km (3 nm) or greater, and the ceiling is not 305 m (1,000 ft) or greater;

(6) Detonation will not occur earlier than 3 hours after sunrise or later than 3 hours prior to sunset to ensure adequate daylight for pre- and post-detonation monitoring; and

(7) The area will be monitored for 48 hours after each detonation, and for 7 days following the last detonation, to find, document and track any injured animals. If post-detonation monitoring shows that marine mammals or sea turtles were killed or injured as a result of the test, or if any marine mammals or sea turtles were observed in the safety range immediately after a detonation, testing will be halted until procedures for subsequent detonations can be reviewed and changed as necessary.

Detailed descriptions of the measures for mitigation and monitoring the shock

test can be found in Section 5 of the Navy's DEIS or FEIS.

Reporting

Within 120 days of the completion of shock testing, the Navy will submit a final report to NMFS. This report will include the following information: (1) Date and time of each of the detonations; (2) a detailed description of the pre-test and post-test activities related to mitigating and monitoring the effects of explosives detonation on marine mammals and their populations; (3) the results of the monitoring program, including numbers by species/stock of any marine mammals noted injured or killed as a result of the detonations and numbers that may have been harassed due to undetected presence within the safety zone; and (4) results of coordination with coastal marine mammal/sea turtle stranding networks.

Substantial Changes to the Proposed Rule

The effective date of the rule is changed from a beginning date of April 1st to a beginning date of May 1st in order to conform with the Navy's small take application. (May 1st had been chosen by the Navy because of a determination that this date provided additional protection to sea turtles which are more abundant off the inshore waters off Mayport in April).

With the decision made by the Navy, through completion of its Record of Decision (part of which was its NEPA documentation), to conduct the shock trial in the offshore waters of the Atlantic Ocean off Mayport, FL, the list of affected marine mammals has been amended to authorize the taking of only those species with some potential to be in the Mayport, FL offshore region between May and September. The following species have therefore been removed: Blue whale (Balaenoptera musculus); fin whale (*B. physalus*); sei whale (*B. borealis*); Bryde's whale (*B. edeni*); minke whale (*B. acutorostrata*); northern right whale (*Eubalaena glacialis*); humpback whale (*Megaptera novaeangliae*); long-finned pilot whale (*Globicephala melas*); northern bottlenose whale (*Hyperoodon ampullatus*); Sowerby's beaked whale (*Mesoplodon bidens*); Atlantic white-sided dolphin (*Lagenorhynchus acutus*); harbor porpoise (*Phocoena phocoena*), and harbor seal (*Phoca vitulina*).

Costs and Benefits

In addition to allowing the Navy to take a small number of marine mammals incidental to conducting the shock trial, this final rule requires the Navy to provide NMFS and the public with information on the shock trial's effect on the marine environment, especially on marine mammals. Besides the improved survivability of U.S. armed forces at sea and the Navy's multi-billion dollar ship assets, this final rule will result in NMFS and the public being provided this information. NMFS believes that obtaining this information is extremely important because shock trials are not the only explosive noise source in the world's oceans, and the scientific findings resulting from monitoring are likely to be directly applicable to future activities. Also, the mitigation measures for protecting marine mammals, sea turtles and other marine life that will be required by the final rule will result in a substantial reduction in impacts on these animals. Without these regulations, these mitigation measures could not be required to be undertaken by the U.S. Navy. Also, the cost to the Navy to comply with the mitigation and monitoring measures that will be required by this rule cannot be fully determined at this time, however NMFS believes that the cost will be approximately $ 1.8 million, due, in large part, to expenses incurred with conducting 8 aerial surveys for humpback whales and other marine mammals annually.

NEPA

On December 10, 1999 (64 FR 69267), a notice of availability of the Navy DEIS was published. The public comment for that document was extended until March 31, 2000. On February 23, 2001 (66 FR 11288), the Navy released an FEIS on this action. NMFS is a cooperating agency, as defined by the Council on Environmental Quality (40 CFR 1501.6), in the preparation of these documents. NMFS has reviewed the Navy's FEIS and does not have any significant concerns with the findings contained therein. As a result, NMFS hereby adopts the Navy FEIS as its own as provided by 40 CFR 1506.3 and finds that it is unnecessary to either prepare its own NEPA documentation on the issuance of these regulations nor to recirculate the Navy FEIS for additional comments.

ESA

The U.S. Navy requested consultation with NMFS under section 7 of the ESA on this action. In that regard, NMFS concluded consultation with the Navy on this activity on October 10, 2000. The finding of that consultation was that the shock trial is not likely to jeopardize the continued existence of any species under the jurisdiction of NMFS. A copy of the Biological Opinion is available upon request (see **ADDRESSES**).

Conclusions

While NMFS believes that detonation of three to four 4,536–kg (10,000–lb) charges may affect some marine mammals, the latest abundance and seasonal distribution estimates indicate that such taking will result in only small numbers of marine mammals being affected, and that this level of impact will have no more than a negligible impact on the populations of marine mammals inhabiting the waters of the U.S. Atlantic Coast. NMFS concurs with the U.S. Navy, as provided in its FEIS and small take application, that impacts can be mitigated by mandating a conservative safety range for marine mammal exclusion, incorporating aerial, shipboard, and acoustic survey monitoring efforts in the program both prior to, and after, detonation of explosives, and provided detonations are not conducted whenever marine mammals are either detected within the safety zone, or may enter the safety zone at the time of detonation, or if weather and sea conditions preclude adequate aerial surveillance. Since the taking will not result in more than the incidental harassment (as defined by the MMPA Amendments of 1994) of small numbers of certain species of marine mammals, will have only a negligible impact on these stocks, will not have an unmitigable adverse impact on the availability of these stocks for subsistence uses, and, through implementation of required mitigation and monitoring measures, will result in the least practicable adverse impact on the affected marine mammal stocks, NMFS has determined that the requirements of section 101(a)(5)(A) of the MMPA have been met and the LOA can be issued.

Authorization

Accordingly, NMFS issued an LOA on the date of this document to the U.S. Navy to take small numbers of marine mammals incidental to conducting a shock trial of the USS WINSTON S. CHURCHILL in the offshore waters off Mayport, FL, provided the previously mentioned mitigation, monitoring, and reporting requirements are carried out.

Classification

This action has been determined to be not significant for purposes of Executive Order 12866.

The Chief Counsel Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration, when this rule was proposed, that, if adopted,

it would not have a significant economic impact on a substantial number of small entities since it would apply only to the U.S. Navy and would have no effect, directly or indirectly, on small businesses. It will also affect a small number of contractors providing services related to reporting the impact of the shock trial on marine mammals. Some of the affected contractors may be small businesses, but the number involved would not be substantial. Further, since the monitoring and reporting requirements are what would lead to the need for their services, the economic impact on them would be beneficial. Accordingly, the analytical requirements of the Regulatory Flexibility Act do not apply and a regulatory flexibility analysis has not been prepared.

The Assistant Administrator for Fisheries, NOAA, finds for good cause, under section 553(d)(3) of Title 5 of the U.S.C., namely that it is unnecessary and contrary to public interest to delay the effective date of this rule for 30 days. This rule authorizes the issuance of an LOA by NMFS and sets forth the mitigation, monitoring and reporting requirements that the U.S. Navy must comply with in conjunction with the shock test of the USS WINSTON S. CHURCHILL. Neither NMFS nor the U.S. Navy need any time in order to come into compliance with the requirements of this rule and are prepared to implement them immediately. Further, because the U.S. Navy has completed its requirements under NEPA and has assets ready to conduct the shock trial, a delay of 30 days would be costly to the U.S. Navy and a waste of taxpayer dollars.

List of Subjects in 50 CFR Part 216

Administrative practice and procedure, Imports, Indians, Marine mammals, Penalties, Reporting and recordkeeping requirements, Transportation.

Dated: April 26, 2001

Clarence Pautzke,

Acting Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service

For reasons set forth in the preamble, 50 CFR part 216 is amended as follows:

PART 216—REGULATIONS GOVERNING THE TAKING AND IMPORTING OF MARINE MAMMALS

1. The authority citation for part 216 continues to read as follows:

Authority: 16 U.S.C. 1361 *et seq.*

2. Subpart N is added to read as follows:

Subpart N—Taking of Marine Mammals Incidental to Shock Testing the USS WINSTON S. CHURCHILL by Detonation of Conventional Explosives in the Offshore Waters of the U.S. Atlantic Coast

Sec.

216.151 Specified activity, geographical region, and incidental take levels.
216.152 Effective dates.
216.153 Permissible methods of taking; mitigation.
216.154 Prohibitions.
216.155 Requirements for monitoring and reporting.
216.156 Modifications to the Letter of Authorization.

Subpart N—Taking of Marine Mammals Incidental to Shock Testing the USS WINSTON S. CHURCHILL by Detonation of Conventional Explosives in the Offshore Waters of the U.S. Atlantic Coast

§ 216.151 Specified activity, geographical region, and incidental take levels.

(a) Regulations in this subpart apply only to the incidental taking of marine mammals specified in paragraph (b) of this section by U.S. citizens engaged in the detonation of conventional military explosives within the waters of the U.S. Atlantic Coast offshore Mayport, FL for the purpose of shock testing the USS WINSTON S. CHURCHILL.

(b) The incidental take of marine mammals under the activity identified in paragraph (a) of this section is limited to the following species: Sperm whale (*Physeter macrocephalus*); dwarf sperm whale (*Kogia simus*); pygmy sperm whale (*K. breviceps*); pilot whale (*Globicephala macrorhynchus*); Atlantic spotted dolphin (*Stenella frontalis*); Pantropical spotted dolphin (*S. attenuata*); striped dolphin (*Stenella coeruleoalba*); spinner dolphin (*S. longirostris*); Clymene dolphin (*S. clymene*); bottlenose dolphin (*Tursiops truncatus*); Risso's dolphin (*Grampus griseus*); rough-toothed dolphin (*Steno bredanensis*); killer whale (*Orcinus orca*); false killer whale (*Pseudorca crassidens*); pygmy killer whale (*Feresa attenuata*); Fraser's dolphin (*Lagenodelphis hosei*); melon-headed whale (*Peponocephala electra*); Cuvier's beaked whale (*Ziphius cavirostris*), Blainville's beaked whale (*Mesoplodon densirostris*); Gervais' beaked whale (*M. europaeus)*; True's beaked whale (*M. mirus*); and common dolphin (*Delphinus delphis*).

(c) The incidental take of marine mammals identified in paragraph (b) of this section is limited to a total of no more than 4 mortalities, 6 injuries, and 2,885 takings by harassment, except that the incidental taking by serious injury or mortality for species listed in paragraph (b) of this section that are also listed as threatened or endangered under § 7.11 of this title, is prohibited.

§ 216.152 Effective dates.

Regulations in this subpart are effective from May 1, 2001, through September 30, 2001.

§ 216.153 Permissible methods of taking; mitigation.

(a) Under a Letter of Authorization issued pursuant to § 216.106, the U.S. Navy may incidentally, but not intentionally, take marine mammals by harassment, injury or mortality in the course detonating up to 4 4,536 kg (10,000 lb) conventional explosive charges within the area described in § 216.151(a) provided all terms, conditions, and requirements of these regulations and such Letter of Authorization are complied with.

(b) The activity identified in paragraph (a) of this section must be conducted in a manner that minimizes, to the greatest extent possible, adverse impacts on marine mammals and their habitat. When detonating explosives, the following mitigation measures must be utilized:

(1) If marine mammals are observed within the designated safety zone prescribed in the Letter of Authorization, or within the buffer zone prescribed in the Letter of Authorization and on a course that will put them within the safety zone prior to detonation, detonation must be delayed until the marine mammals are no longer within the safety zone or on a course within the buffer zone that is taking them away from the safety zone.

(2) If a marine mammal listed under the Endangered Species Act is detected within the buffer zone, and subsequently cannot be detected, detonation must not occur until sighting and acoustic teams have searched the area for 2.5 hours.

(3) If a northern right whale is seen, detonation must not occur until the animal is positively reacquired outside the buffer zone and at least one additional aerial monitoring of the safety range and buffer zone shows that no other right whales are present;

(4) If weather and/or sea conditions as described in the Letter of Authorization preclude adequate aerial surveillance, detonation must not occur until conditions improve sufficiently for aerial surveillance to be undertaken.

(5) If post-test surveys determine that an injurious or lethal take of a marine mammal has occurred, the test procedure and the monitoring methods must be reviewed and appropriate

changes must be made prior to conducting the next detonation.

§ 216.154 Prohibitions.

Notwithstanding takings authorized by § 216.151(b) and by a Letter of Authorization issued under § 216.106, the following activities are prohibited:

(a) The taking of a marine mammal that is other than unintentional.

(b) The violation of, or failure to comply with, the terms, conditions, and requirements of this part or a Letter of Authorization issued under § 216.106.

(c) The incidental taking of any marine mammal of a species not specified in this subpart.

§ 216.155 Requirements for monitoring and reporting.

(a) The holder of the Letter of Authorization is required to cooperate with the National Marine Fisheries Service and any other Federal, state or local agency monitoring the impacts of the activity on marine mammals. The holder must notify the appropriate Regional Director at least 2 weeks prior to activities involving the detonation of explosives in order to satisfy paragraph (f) of this section.

(b) The holder of the Letter of Authorization must designate qualified on-site individuals, as specified in the Letter of Authorization, to record the effects of explosives detonation on marine mammals that inhabit the Atlantic Ocean test area.

(c) The test area must be surveyed by marine mammal biologists and other trained individuals, and the marine mammal populations monitored, 48-72 hours prior to a scheduled detonation, on the day of detonation, and for a period of time specified in the Letter of Authorization after each detonation. Monitoring shall include, but not necessarily be limited to, aerial and acoustic surveillance sufficient to ensure that no marine mammals are within the designated safety zone nor are likely to enter the designated safety zone prior to or at the time of detonation.

(d) Under the direction of a certified marine mammal veterinarian, examination and recovery of any dead or injured marine mammals will be conducted. Necropsies will be performed and tissue samples taken from any dead animals. After completion of the necropsy, animals not retained for shoreside examination will be tagged and returned to the sea. The occurrence of live marine mammals will also be documented.

(e) Activities related to the monitoring described in paragraphs (c) and (d) of this section, or in the Letter of Authorization issued under § 216.106, including the retention of marine mammals, may be conducted without the need for a separate scientific research permit. The use of retained marine mammals for scientific research other than shoreside examination must be authorized pursuant to subpart D of this part.

(f) In coordination and compliance with appropriate Navy regulations, at its discretion, the National Marine Fisheries Service may place an observer on any ship or aircraft involved in marine mammal reconnaissance, or monitoring either prior to, during, or after explosives detonation in order to monitor the impact on marine mammals.

(g) A final report must be submitted to the Director, Office of Protected Resources, no later than 120 days after completion of shock testing the USS WINSTON S. CHURCHILL. This report must contain the following information:

(1) Date and time of all detonations conducted under the Letter of Authorization.

(2) A description of all pre-detonation and post-detonation activities related to mitigating and monitoring the effects of explosives detonation on marine mammal populations.

(3) Results of the monitoring program, including numbers by species/stock of any marine mammals noted injured or killed as a result of the detonation and numbers that may have been harassed due to presence within the designated safety zone.

(4) Results of coordination with coastal marine mammal/sea turtle stranding networks.

§ 216.156 Modifications to the Letter of Authorization.

(a) In addition to complying with the provisions of § 216.106, except as provided in paragraph (b) of this section, no substantive modification, including withdrawal or suspension, to the Letter of Authorization issued pursuant to § 216.106 and subject to the provisions of this subpart shall be made until after notice and an opportunity for public comment.

(b) If the Assistant Administrator determines that an emergency exists that poses a significant risk to the well-being of the species or stocks of marine mammals specified in § 216.151(b), or that significantly and detrimentally alters the scheduling of explosives detonation within the area specified in § 216.151(a), the Letter of Authorization issued pursuant to § 216.106 may be substantively modified without prior notification and an opportunity for public comment. Notification will be published in the **Federal Register** subsequent to the action.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 600 and 660

[Docket No. 001226367–0367–01; I.D. 121500E]

Fisheries off West Coast States and in the Western Pacific; Pacific Coast Groundfish Fishery; Annual Specifications and Management Measures; Corrections; Trip Limit Adjustments

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Trip limit adjustments; correction to the 2001 specifications; fishing restrictions for the Pacific Coast groundfish fishery; request for comments.

SUMMARY: NMFS announces changes in the following trip limits for the Pacific Coast groundfish fisheries north and south of 40°10′ N. lat.: limited entry trawl for flatfish north, limited entry fixed gear and open access for minor nearshore rockfish north, open access for minor nearshore rockfish south, and open access for yellowtail rockfish taken with salmon troll gear. These actions, which are authorized by the Pacific Coast Groundfish Fishery Management Plan (FMP) are intended to help the fisheries achieve optimum yield (OY) while protecting overfished and depleted stocks. This document also contains corrections relating to the lingcod and boccacio OYs, which were initially announced in the annual specifications and management measures that were published on January 11, 2001.

DATES: Changes to management measures are effective 0001 hours (local time) May 1, 2001, unless modified, superseded, or rescinded. These changes are effective until the effective date of the 2002 annual specifications and management measures for the Pacific Coast groundfish fishery, which will be published in the **Federal Register**. Comments on this rule will be accepted through May 21, 2001.

ADDRESSES: Submit comments to Donna Darm, Acting Administrator, Northwest Region (Regional Administrator), NMFS, 7600 Sand Point Way N.E., Bldg. 1,