

Citizens Opposing Active Sonar Threats
COAST
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Mr. Keith Jenkins
Naval Facilities Engineering Command Atlantic (Code EV21KJ)
6506 Hampton Boulevard
Norfolk, VA 23508-1278

Dear Mr. Jenkins:

The following comments are in regards to the Navy's Draft Overseas Environmental Impact Statement /Environmental Impact Statement for its proposed Undersea Warfare Training Range. Please include these comments in the public record.

It is troubling, and it seems improper that the public comment period should end before the release of the report by the National Marine Fisheries Service on the mass stranding involving at least 37 whales of 3 different species which occurred coincident with Navy sonar exercises off the coast of North Carolina last January. This event is extremely relevant to the proposed USWTR, and in particular to the Navy's site of choice, off the same coast as the stranding incident occurred. NMFS has indicated the report will be released early in 2006. Had the public been allowed to consider the information contained in this report, and incorporate it into comments on the DEIS, the public would have benefitted greatly.

COAST finds the Navy's DEIS seriously flawed for a number of reasons. It is clear that the Navy lacks any genuine interest in scientifically determining how the construction and operation of the proposed USWTR will impact the marine and landside environments. This is clear for several reasons. The DEIS has failed to address some very relevant information when that information contradicts or otherwise suggests that the case being made by the DEIS is not accurate. The DEIS also makes a number of assumptions, and comes to a number of conclusions that cannot be scientifically defended. Some of these assumptions and conclusions are then used as the foundation for the DEIS claims that the construction and operation of the USWTR will result in no serious adverse impacts to the environment. The DEIS repeatedly claims that use of its mitigation measures will greatly reduce or eliminate threats to marine mammals and sea turtles posed by the construction and operation of the proposed USWTR, as if by repeating it often enough it will convince the reader. Much is based upon this DEIS assumption, including its conclusion that only negligible impacts would occur and that these would not affect annual rates of recruitment or survival of affected species. Yet a close look at these mitigation measures reveals some rather pathetic strategies that have been proven largely ineffective in the past and will remain so. COAST believes that the DEIS was written not with the intention of fulfilling the requirements of a detailed environmental analysis, but rather, in such a way as to confuse the reader and mislead them into accepting the Navy's predetermined conclusion, in much the same

manner as governments have been known to “fix the intelligence” to achieve a desired policy result. To put it in other words, the DEIS attempts to “pull the wool over our eyes”.

The DEIS (1-1) explanation of the need for the proposed action is unconvincing. Why does the role of the U.S. on the world stage and the “global War on Terror” make it imperative that U.S. forces are the best trained, prepared, and equipped in the world? What exactly is our role? What is the legal basis for this role? The DEIS (1-6) claim that “the U.S. has played a significant role in the resolution of international disturbances and conflicts that threaten to disrupt the security and stability of regions abroad” is very debatable regarding Iraq and a number of other places around the world. A great many people, institutions, and governments, believe that U.S. involvement in some disturbances and conflicts are in violation of international and domestic laws, and combined with such matters as the U.S. involvement in detainee abuse and torture, have actually acted to reduce our security because of increased anger these actions have provoked.

The Navy seems very intent on stressing the threat of modern diesel submarines, yet seems to have no recognition at all of the fact that the very real environmental degradation now occurring worldwide also threatens the national security not only of this nation, but of all nations. Indeed, an unbiased look at conflicts around the world will show that some of these are directly related to dwindling resources such as oil, although these conflicts are often waged under other pretenses. Why does the Navy not acknowledge the importance of a healthy, sustainable environment, not only in terms of avoiding conflicts with other nations over resources, but also for the very simple reason that without a healthy, sustainable environment, life is threatened by an environment heading for collapse. This also affects national and global security. While the Navy did prepare this DEIS because it was required by law to do so, the deficiencies of the DEIS make it clear that it does not view degradation of the environment as a threat to national security. This lack of understanding is detrimental to the real security of Americans.

The DEIS (1-17) included consistency determinations as required under the Coastal Zone Management Act, only for the states of North Carolina, Virginia, and Florida. However, this is inadequate, as other state’s coastal waters will be impacted by the proposed USWTR, regardless of which site is used. For example, an increase in vessel traffic near or through the coastal waters of states adjoining the selected USWTR might have an adverse effect upon the natural resources of the state’s coastal zone. There is the potential for adverse impacts to occur which might affect the state’s fisheries or protection of listed species or their habitat, even if the selected site is not directly off that state’s coastal waters. It is difficult to understand how the DEIS could have concluded that it did not need to submit consistency determinations for these bordering states.

The marine environment is one that is filled with naturally occurring sound. It is also home to numerous organisms who hear or otherwise sense this sound. Many of these make use of this sound for important functions such as finding food, communication, detecting predators, and other things necessary to their survival. Regardless of which site is chosen, construction and operation of the USWTR site will result in a tremendous increase in noise levels not only in the site itself, but also around the site and between the site and shore. Construction of the USWTR

instrumentation array including burial of interconnect cable between transducer nodes and burial of the trunk cable through either hard bottom or soft sediment would produce sound (as well as tear up the sea floor). The site will then need to have repairs and maintenance performed, all of which will contribute further to increased sound levels. Aircraft, ships, and submarines involved in the exercises would also result in greatly increased noise levels. It goes without saying that the firing of exercise weapons and deployment of active acoustic sensors as well as other acoustic sources (some of which are very intense), will do the same. Compounded, all these sound sources will result in a vast increase in noise levels both in and surrounding the site. Although the DEIS attempts to minimize the potential impacts to the creatures who inhabit both the marine and landside environments, it is fairly obvious that there is a very great potential for impacts, including serious impacts.

Based upon the few studies on fish cited, the DEIS (4.3-76) states “significant effects to fish are not anticipated with implementation of the proposed action.” How can the results of these few limited studies be applied to all of the different fish species who will be impacted by these sonars in the wild? What does the DEIS (4.3-76) mean when, regarding threshold shifts in fish classified as hearing specialists, it states that these threshold shifts are temporary and it is not evident that they lead to any long term behavioral disruptions in fish that are biologically significant? Is it not possible that fish who have experienced temporary hearing loss may not be able to engage in very important behavior such as finding food and avoiding predators? The assumption that loss of these abilities is not “biologically significant” reveals a lack of understanding on the part of the authors of the DEIS, of the importance of hearing for fish and other marine life.

The DEIS (3.3-6) has inappropriately excluded invertebrates from further analysis from an acoustic perspective. Why has it failed to mention some rather important information regarding the impact of sound on squid. Why did the DEIS not discuss the 2001 and 2003 strandings of giant squid which occurred coincident to seismic surveys? (MacKenzie 2004) The fact that these giant squid were found to have not only severe ear injuries but also extensive injuries to other internal organs clearly indicates that the operation of a USWTR may create the potential for impacts to these creatures, yet the DEIS ignores this. What about strandings of squid reported in Guerra et al. (2004) which also occurred coincident with seismic surveys? What about the research done on the effects of seismic noise on snow crabs (DFO 2004)? This research also revealed impacts to the organs from exposure to this noise. While seismic noise differs in some ways from mid-frequency sonar sound, it does share some characteristics including its intensity. Since we do not know precisely which characteristics of the seismic sound caused these reactions in the squid and snow crabs, it is possible that mid -frequency sonar may have similar effects. The omission of this information weakens the credibility of this DEIS.

In regards to sea turtles, it is hard to see how the creation and operation of a USWTR can do other than impact these endangered and threatened species. The DEIS statement (3.3-5) that “the potential for sea turtles to experience direct acoustic effects from USWTR operations is negligible” is not believable. Just because the best hearing range for sea turtles is most likely below the level of projected sound sources on the USWTR, does not mean that they won't hear

them or be impacted by them in places other than their ears. That they were excluded from the acoustic effects analysis shows just how disinterested the Navy really is in learning how their activities affect marine life, even when these activities may play a significant role in pushing species over the edge into extinction. The DEIS statement (4.2-7) "The construction period for installing cable is of limited duration; thus there would be a limited period during which sea turtles using sea floor habitat could potentially be disturbed." does not address the simple fact that long time periods are not required to disturb, injure, and kill. It is one of many such statements in the DEIS which attempts to downplay very real potential adverse impacts.

The DEIS (3.3-6) exclusion of seabirds from further analysis from an acoustic perspective is disturbing. Do the authors of the DEIS actually believe that because seabirds don't "use" sound underwater, they cannot be affected by this sound? Please explain this curious assumption. To state that seabirds spend a small fraction of their time submerged is not a valid reason to assume that injuries or death cannot occur in this time. To state that they can rapidly disperse to other areas if disturbed does not address the fact that this could disrupt biologically important behavior, or that this dispersal may deplete energy required for other needs necessary for survival.

The DEIS (3.3-7) exclusion of pinniped and manatees from further analysis is improper. Pinnipeds may in fact occur in waters near all three proposed USWTR sites, according to the most recent NMFS stock assessments. Endangered manatees do occur in estuarine and coastal waters in North Carolina and in Florida, but are sometimes also sighted farther offshore. Even if not directly impacted by USWTR operations on the range itself, both pinnipeds and manatees are likely to be affected by increased noise levels from installation and maintenance of the cable, as well as increased ship traffic resulting from the USWTR operations. This increase in ship traffic will mean more noise, which, as discussed below, may cause negative effects such as stress, masking, and behavioral disturbances, as well as an increase in the potential for injuries and death occurring from ship strike. Clearly, the DEIS should have addressed these issues.

The DEIS repeatedly claims to be taking a conservative approach. But when the occurrence of marine mammals at the USWTR sites is assessed (3.2), it was certainly not done in a conservative manner. In a number of cases the DEIS states that a given species is not expected to occur in the USWTR site even though there are confirmed sightings of this species in the OPAREA. Did the DEIS not make use of the most recent NMFS stock assessments? The DEIS uses the terms "migrant, extralimital, strays, and vagrants" as if by using these terms they are somehow not worthy of being "expected". Although it may be inconvenient for the Navy, marine mammals do not necessarily restrict their movements to only certain locations at only certain times. Beyond that, this DEIS, which claims to be addressing the potential for adverse impacts in a conservative manner, should take the approach of expecting the unexpected, especially considering the Navy concern with "mission readiness".

When dealing with the issue of acoustic impacts, the DEIS tends to leave the reader with the impression that these impacts will only, if they occur at all, occur within the perimeters of the USWTR. Aside from all the transiting vessels and aircraft to and from the site, the fact remains that deployment of the high-intensity mid-frequency sonars and other active acoustic sensors and

sources within the range will very often result in that sound traveling outside of the range's boundaries. In fact, as discussed further below, it is known that sonar operations have injured and killed marine mammals even when the source of the sonar was at least 25 km away. Conditions such as surface ducting can extend even further the distances at which dangerous levels of sonar sound can be carried. So while the DEIS often states that a certain species is not expected to occur in a particular USWTR site, the fact is that it does not necessarily have to be inside the site to be impacted.

The DEIS ((4.8-5) appears to acknowledge the fact that stress in animals may lead to serious negative effects. Some of these effects may include a weakening of immune systems, which leaves the animals more vulnerable to parasites and diseases that normally would not be fatal. Stress may also reduce reproduction rates. Chronic stress may cause damage to the heart muscle and vasculature. Yet despite this acknowledgment, the DEIS has totally failed to consider the effects of stress for any marine species caused by USWTR operations. Why is this? This is a very serious omission. Due to the intensity of some of the sound sources which will be deployed in these operations, this noise may impact waters at a very considerable distance from the site, particularly if environmental conditions act to create effects such as surface ducting. Large expanses of ocean will be filled with lower levels of sound that will impact the animals in these waters. Stress is one of several adverse effects which may occur in animals exposed to these lower levels of sound. Where is the discussion of how these operations may cause physiological effects resulting from increased noise levels? Where is the discussion of how these operations might affect pregnancy and birth rates? Where is the discussion on the effects of increased noise levels upon young animal's development? If increased stress levels lead to increased aggression, what might the impacts of this be? How may increased stress levels resulting from USWTR operations add to the stress levels marine animals may already be bearing due to other anthropogenic sound sources? As the oceans are oftentimes already filled with sound from these other sources, the addition of even low levels of sound from the USWTR will likely increase stress levels. How may increased stress levels resulting from these operations add to stress levels caused by threats that are not acoustic in nature? The failure of this DEIS to discuss the issue of stress in marine animals resulting from USWTR operations clearly demonstrates its total failure to sincerely investigate what the real impacts may be.

The DEIS discussion of the potential of masking to adversely impact marine mammals, fish, and other species is inadequate. What about the effects of reverberation increasing the time animals may be exposed to the sound of sonar pings? For example, NMFS arrived at the conclusion that in the Haro Strait sonar incident discussed further below, the duration of the sonar pings of 1-2 seconds was increased by reverberation effects to up to 19 seconds. Obviously, this would greatly increase not only the time in which masking may occur, but also the probability that negative effects will result from masking. What about masking occurring due to the noise generated by more than one sound source at a time? Considering that aircraft, ships, submarines, as well as various other acoustic sources will be operating at the same time, possibly in a marine environment which is creating reverberations of all this sound, the potential for masking is far greater than what one is led to believe by the DEIS. The DEIS statement (4.3-29) "For the reasons outlined above, the chance of sonar operations causing masking effects is considered negligible in

this OEIS/EIS” is simply not credible.

The DEIS (4.3.11) mentions the possibility of resident populations in the area of the range for a number of species. This is offered in an attempt to downplay the number of individual animals that may be acoustically impacted by USWTR activities. If there are in fact resident populations in the area, the potential for significant impacts to occur is obviously very great for these animals. If the population abandons this area, is that not a rather serious impact? If that population is genetically distinct, it is difficult to see how it could be argued this would have only negligible impacts on the species or stock. On the other hand, if the population remains in the area and somehow manage to avoid being outright injured or killed, and are able to carry on with their biologically “important” behaviors, it is extremely doubtful that they will be able to avoid the effects of stress, which as stated above, may have serious biological consequences.

The DEIS sound exposure thresholds, upon which so much is based, are totally unfounded and are simply not valid. The research cited in the DEIS (4.3.3.1) upon which the thresholds for temporary threshold shift, permanent threshold shift, and behavioral disturbance were established, were based upon a very small number of individuals from only several species. How can the results from this research possibly be extended to make claims about the threshold levels for all other marine mammals? The DEIS makes use of information about terrestrial mammal hearing. Is it reasonable to apply this information to marine mammals? Explain why it is acceptable for the DEIS (4.3-18) to state “a variety of terrestrial mammal data sources point toward 40 dB as a reasonable estimate of the largest amount of TS that may be induced without PTS”, when it then also states (4.3-21) “A large body of research on terrestrial animal and human response to airborne noise exists, but results from those studies are not readily extendable to the development of effect criteria and thresholds for marine mammals”. It appears that the DEIS has no problems extending research results when it works to reinforce the preferred conclusion, but not when it conflicts with this conclusion.

It is disturbing that the author’s of the DEIS are apparently so willing to blind themselves to the fact that captive animals, who are being experimented upon in small tanks, may not react in the same way as would marine mammals in their natural habitat. For one thing, these animals are certainly aware of the fact that they are captive, and this surely plays a role in their behavioral reactions to sound. Regarding Schlundt et al.(2000) and Finneran and Schlundt (2004) (4.3- 26), is it possible that these captive animals would, for example, return to the site of a previous intense sound exposure, not because they wanted to, or under natural conditions would, but rather because they felt their captors expected or wanted them to? Could there have been an attempt to please their captors, or is it possible they feared the consequences were they not to behave as they believed they were supposed to? How might their exposure to loud sound in past tests affect their behavior in the cited studies? These animals, removed from their natural environment and separated from their natural communities, are exceedingly unlikely to behave in ways similar to other marine mammals who are not held captive in an unnatural environment. The DEIS use of research on small numbers of individual captive animals from only several species to establish thresholds for TTS, PTS, and behavioral disturbance for all marine mammals in the wild cannot be scientifically defended and is absolutely unacceptable.

The DEIS (4.3-26) states that the threshold for behavioral disturbance of 190 dB was derived from the fact that when exposed to RLs of 190 dB, animals in these tests would alter their behavior in 50% of the sessions. Yet some animals altered their behavior at much lower levels, some as low as 160 dB. Obviously, this means that these lower levels of sound did in fact effect behavior in some of these animals. Not all animals have the same sensitivity to sound. Because many marine mammals are highly social animals living together in groups, should some of these animals who are more sensitive to sound be affected, the whole group may also be impacted. It is well known that in some mass strandings, most of those stranded appear to have been healthy prior to stranding, but for some reason beach themselves following the stranding of other members of the group. Because of the highly social nature of some marine mammals, if even one individual within the group is negatively impacted by sound, it may lead to other members or even the entire group being impacted.

The threshold for behavioral disturbance is set at 190 dB, despite the fact that it is far higher than this threshold has ever been set in the past. The DEIS has failed to justify this abrupt threshold increase. Do the authors of the DEIS assume that previous research results such as Richardson et al. (1995) are simply invalid? If so, why? The fact of the matter is that RLs far lower than this have already resulted in marine mammals being disturbed, injured and killed. While it is not yet fully understood whether the sound itself has injured or killed these animals, or if the animal's behavioral reactions to the sound cause these impacts, in the end, the results are the same; injured and dead animals. Given this, a 190 dB RL threshold for behavioral disturbance is absurd. It cannot be scientifically supported, and despite the DEIS claim, can never reasonably be considered "conservative".

The DEIS states (4.3-22) "Behavioral observations of marine mammals exposed to anthropogenic sound sources exist; however, there are few observations and no controlled measurements of behavioral disruptions of cetaceans caused by sound sources with frequencies, waveforms, durations, and repetition rates comparable to those employed by the tactical sonars to be used on the proposed USWTR." This may be true. However, it is telling that the DEIS failed to address the well publicized observations of recognized marine mammal experts, along with the observations of several whale watch operators, of the behavioral disruptions of Dall's porpoises, at least one minke whale, and the entire J-pod of orcas on May 5, 2003, when the Navy destroyer "Shoup" was engaging in sonar exercises in the Strait of Juan de Fuca and Haro Strait. The observations included significant behavioral disruptions clearly caused by the Shoup's mid-frequency SQS-53 sonar (the same system to be deployed at the USWTR). The distance between the source of the sound and the whales and porpoises who were so obviously being disrupted was considerable, as the Shoup was observed (and videotaped) on the horizon, while the whales and porpoises were generally far closer to shore. The National Marine Fisheries Service estimates that the J-pod orcas were mostly exposed to RLs below 160 dB. That the DEIS fails to discuss or even mention the observations of these experienced observers of marine mammal behavior is not reasonable, even if there were no controlled measurements. Clearly, these behavioral observations involving fairly large numbers of wild marine mammals of 3 different species reacting to the same sonar which will be in use at the USWTR is far more relevant than the experiments conducted on a small number of animals from only 2 species held captive in an unnatural environment that were

exposed to sounds “similar” to sonar.

In regards to recovery that the DEIS (4.3-27) implies will occur between pings, why did it not take into consideration the potential for effects such as reverberation and multiple sources of sound operating simultaneously to close any opportunity for recovery to take place? The fact that the DEIS does not address these potentials indicates that it was not making assessments in a manner as conservative as the DEIS authors would like the reader to believe.

The DEIS (4.3-18) threshold of 215 dB for PTS and Level A harassment is bizarre, especially considering the Bahamas mass stranding event in 2000. A report of the Scientific Committee of the International Whaling Commission states that these whales were exposed to mid-frequency sonar RLs of no more than 160-165 dB for 30 seconds. It has also been estimated that these whales had received an average level of less than 140 dB of mid-frequency sonar (Hildebrand and Balcomb 2004). It is an understatement to say that there is a very significant difference in these two levels of received sound. Why has the DEIS not addressed these level A impacts which occurred at received sound levels so much lower than the DEIS threshold for Level A harassment? Very clearly, injuries other than permanent hearing loss are being caused by marine mammal’s exposure to sonar sound at RLs far below the DEIS threshold for injury. Please explain how the threshold of 215 dB for PTS and Level A harassment is justified given the vast difference in levels of received sound between 215 dB and 140 dB. It is important to note that the Bahamas stranding event involved not just beaked whales, but also several minke whales and a dolphin. This is not just a beaked whale issue.

Why is it that threshold levels for TTS and PTS, as well as behavioral thresholds, have been increased so drastically in recent years? It seems that the Navy and other producers of loud sound in the oceans are anxious to produce studies that point to higher and higher thresholds, however flimsy the evidence (and regardless of the consequences).

The DEIS (4.3-30) attempts to justify its refusal to set “separate, meaningful impact thresholds” for beaked whales by saying the “exact causes of the stranding events are unknown”. The claim that it is taking a conservative approach by counting all predicted Level B harassment of beaked whales as Level A harassment is nonsense, considering the 190dB Level B threshold, and the fact that injuries and deaths have occurred in beaked whales exposed to sonar at RLs far lower than this.

The DEIS (4.3-31) briefly discusses non-auditory injuries, including acoustically mediated bubble growth. It states that the evidence supporting this effect is “debatable”. However, while it is not yet known if bubble growth is induced by the sonar sound itself, or by the whale’s behavioral reactions to that sound, it is widely accepted that in vivo bubble growth can occur in supersaturated marine mammal tissue when the animals are exposed to sounds as low or lower than 150 dB RL, leading to their injury or death (Houser et al. 2001, Jepson et al. 2003, Fernandez et al. 2005, Cox et al. In press). It is important to note here that even if it is the animal’s reaction to the sound which leads to bubble growth, the animal need not strand to be injured or killed. Either of these effects may occur regardless of whether the animal strands or not. The fact that the

DEIS did not address this issue is disturbing.

While the DEIS appears to dismiss air cavity resonance due to sonar exposure as a cause of injury in marine mammals, the Beaked Whale Workshop did not. Although they considered it as less likely than other non-auditory effects, resonance was not ruled out (Cox et al. In press).

To claim, as the DEIS ((4.3-33) does, that acoustic sources for the USWTR, whose source levels are below 205 dB do not require further examination because they have a “negligible potential to affect marine mammals” is unjustified. Given the facts that sounds well below 205 dB have already been found to have injured and killed marine mammals, the failure to analyze the potential impacts of these sound sources is another serious omission. The DEIS also failed to address how sound from these sources, combined with sound from other sources, may have cumulative and synergistic effects on marine life exposed to this noise.

The DEIS (3.2-30) does mention very briefly 3 well publicized standing events, all of which involve beaked whales. Its discussion of the May 1996 stranding which occurred on the Greek coast failed to mention some of the findings of SACLANTCEN —133, NATO’s report on this incident. One of these is the fact that the movements of the NATO ship (which was the source of the sonar transmissions) corresponded very closely in time and in space with the strandings of these whales. This report also ruled out all other environmental factors as a cause of this stranding. It has been estimated that because the first whale to strand did so 40 km from the ship transmitting the sonar an hour after the exercise began, and because beaked whales swim at a maximum of 15 km/hr, that this whale must have been at least 25 km from the sonar source. That is a considerable distance. It has also been estimated, using NATO calculations, that the RL for this whale, at this distance, was around 150 dB. Why has the DEIS neglected to discuss this information?

Regarding the Bahamas stranding incident, the DEIS (3.2-30) states that “One spotted dolphin was initially associated with the event, but was later found to have succumbed to disease.” Is the reader supposed to believe that this diseased dolphin just happened to strand at that time, and it was just a total coincidence that it was at the same time as the sonar exercise and the stranding of all the other animals? The DEIS apparent attempt to suggest this is absurd. Diseased animals can be injured or die from effects other than their disease. In fact, diseased animals, or otherwise unhealthy animals, are more susceptible to injury and behavioral disruption from sonar. Why has the DEIS not addressed this issue?

How is it that the DEIS failed to mention that in the case of the 2000 Bahamas mass stranding event, the resident population of beaked whales, which was the subject of years of on-going research including the photo-identification of individuals, either abandoned the area, or were mostly killed (Balcomb and Claridge 2001)? Neither of these scenarios can be considered to be a negligible impact, particularly if this resident population had a distinct genetic makeup, as appears to be the case in some beaked whale populations (Dalebout et al. In press). That this population-level effect occurred after only one sonar event is extremely troubling. What might be the effects of on-going sonar events? If all or most of the whales in this population were killed,

what became of the bodies of those who did not die on the beach? It is important to ask this, as it raises the question of whether animals that wind up injured or dead on the beach are actually only a small fraction of the total numbers of animals who are being injured and killed by high-intensity naval sonars; the proverbial tip of the iceberg.

While oceanographic features and bathymetry may have been contributing factors in this stranding event, it is also possible that they were not necessary ingredients. It is possible, given all the information above and below, that the simple combination of Navy sonar and beaked whales, minke whales, and one spotted dolphin was all that was needed to produce this event.

Regarding the September 2002 mass stranding in the Canary Islands, why was there no mention of the research (Jepson et al. 2003, Fernandez et al. 2005) which followed this event, or of any of the other mass strandings on the Canary Islands which have occurred coincident to naval maneuvers in recent years?

Why has the DEIS failed to address the numerous other beaked whale strandings which have been associated with naval maneuvers and sonar, or other intense sound sources such as seismic surveys? Many of these events have been documented and have been reported on by the media as well as in scientific publications. They are extremely relevant and should be included in the discussion. Please discuss, at a minimum, the strandings and deaths of beaked whales in Taiwan (2004), Gulf of Alaska (2004), Gulf of California (2002), Madeira (2000), Vieques (2000, 1998), Virgin Islands (1999), Greece (1997), Canary Islands (1991, 1989, 1988, 1985), Lesser Antilles (1974), Corsica (1974), Ligurean Sea, Italy (1966), Gulf of Genoa, Italy (1963), Suruga Bay, Japan (1990, 1987, 1978), and in Sagami Bay, Japan (1989, 1979, 1978, 1963). The fact that when the DEIS (3.2-31) does very briefly mention other mass strandings involving Cuvier's beaked whales, it does not mention that many of these were associated with naval sonars, naval maneuvers, or other intense noise. While it states that "in the majority of cases, oceanic islands with the aforementioned topography are the scenes of such events", why does it not look at those cases where this topography was not present? There are plenty of them to look at. The refusal by the DEIS to carefully look at these other stranding events indicates how little its authors cared to sincerely look at the large potential for serious adverse impacts to beaked whales and other marine mammals resulting from the proposed USWTR operations. Were these strandings not discussed because this information would lead the reader to conclude that the use of high-intensity active naval sonars in general, and USWTR operations in particular, are very serious threats to these animals?

How is it that the DEIS authors found it unimportant to discuss the fact that before high-intensity mid-range sonars were deployed in the 1960's, mass strandings of Cuvier's beaked whales were extremely rare events (Friedman 1989)? Apparently, the ever-growing number of these previously rare stranding events isn't of interest to them.

Why did the DEIS fail to mention stranding events which occurred coincident to Navy sonar exercises that involved cetacean species other than beaked whales? Where is the discussion of, for example, the Haro Strait incident of 2003? Where is the discussion of the event that

occurred in July of 2004 in Hanalei Bay? Where is the discussion of the stranding that took place in North Carolina in January 2005? As mentioned previously, the North Carolina event in particular is extremely relevant to the proposed USWTR. The failure of the DEIS to mention these events strongly suggests that the authors would rather the reader didn't know of them.

Why has the DEIS not discussed the common sense probability that many beaked whales (and other marine mammals) may be being injured and killed by naval sonars, but that these injuries and deaths may go undiscovered, and therefore will not be recorded. While some may strand in remote areas, others (perhaps the great majority) may go unrecorded due to the simple fact that they do not necessarily strand after being injured and killed. It is obvious that a great many naval activities take place far from any shore where injured and dead whales may strand. Fernandez et al.(2005) show evidence indicating that beaked whales who were exposed to sonar most likely died as a result of decompression sickness. While some of these whales stranded, others were found dead in the water and are believed to have died at sea. It is likely that many dead whales sink after dying, their deaths remaining unobserved and unrecorded. The DEIS statements that mass stranding events similar to the Bahamas mass stranding event are not expected at the proposed USWTR sites seems fairly meaningless given the fact that the whales do not have to strand to be harassed, injured, or killed by activities at the USWTR. When beaked whales and other marine mammals are injured and killed at or near the USWTR, how will these injuries and deaths be detected and recorded if the animals do not strand? The fact that the DEIS does not address the high probability of unknown or unrecorded beaked whale injuries or death due to naval sonars is a very serious omission.

Another thing to consider regarding the discovery and recording of stranded marine mammals who may have been injured or killed by naval sonars, is that only a portion of those strandings which are discovered are carefully and transparently investigated, especially when they occur on the shores of places where the resources to carry out such investigations are not available. It is conceivable that in some cases, investigations do not take place because political or economic pressure is applied from governments wishing to keep evidence implicating naval sonars in cetacean deaths from being released. It is also possible that, for the same reason, necropsy or stranding reports are written so as to intentionally mislead the reader regarding the cause of stranding and deaths. Because of these possibilities, it is likely that far more strandings are actually caused by naval sonar than have been documented.

Because of the likelihood of injuries and deaths of beaked whales at or near the USWTR going unobserved and unreported, how might this affect the ability to detect serious impacts to the species and stocks, especially considering how little is actually known about them currently? Is it possible that non-negligible impacts could occur and go undetected, or be detected only after the species or stock has suffered impacts to such an extent that recovery is impossible? Please address these questions.

Regarding beaked whales, the DEIS statement (3.2-41 and 3.2-50) "The multiple stranding records may indicate a higher abundance than sighting data show", may be misplaced. Perhaps what these multiple strandings really indicate is just how effective naval sonars and other sources

of loud anthropogenic ocean noise are at injuring and killing beaked whales. Why did the DEIS not address this possibility?

Why did the DEIS lump together the minimum population estimates for all Mesoplodon and Ziphius beaked whales in the western North Atlantic? These are distinct species. Is it because reliable estimates for the individual populations of these animals are really unknown? If they are known, why were they not given? If they are not known, how can the DEIS possibly determine that only negligible impacts will occur, especially when it admits to the possibility that beaked whales may be resident in the area of all 3 ranges? Please explain precisely how it has been determined that no more than negligible impacts will occur to these beaked whale populations and stocks. This determination is not believable, especially when the combined minimum populations of all four species in the western North Atlantic is only 2,419 individuals.

As was stated above, even if a resident population is not forced to abandon the area and is somehow able to avoid being injured or killed, and is able to carry on activities necessary to survive, these animals would certainly be exposed to levels of sound which could bring about chronic stress. This can cause, among other effects, a drop in reproduction rates that would also result in population-level impacts (4.8-6). How did the DEIS determine that the effects of stress will not adversely impact a resident population? What is the basis for its claim that impacts will only be negligible, particularly regarding population-level effects to resident populations?

The DEIS reveals an extraordinary lack of any real concern on the part of its authors and the Navy when it comes to endangered and threatened species. Not only a lack of concern for the creatures themselves, but also a total lack of any understanding as to the importance of these species to the ecological systems of which they are a part. It demonstrates their level of either ignorance or denial regarding the consequences of species and biodiversity loss, and the very real implications that may have for a genuinely "secure" future for Americans and the people of other nations.

The DEIS claim that the proposed action will not adversely modify or destroy any critical habitat is extremely debatable. While the Site C USWTR is located farther offshore than the designated critical habitat for North Atlantic right whales, construction and maintenance of the site as well as increased ship traffic to the USWTR would result in a significant increase in noise levels and potential for entanglements and ship strikes. This is clearly an adverse modification of designated critical habitat. The DEIS mitigation scheme will do very little, if anything, to alter that fact, as mitigation measures are entirely insufficient. Increased noise, threats of entanglement and ship strike may very well lead to changes in behavior which may adversely affect this tiny population. If these increased noise and threat levels create stress for the right whales in or near their calving grounds, this stress could lead, among other things, to a reduction in their ability to reproduce (4.8-6). For such a severely endangered creature as the right whale, negatively affecting their annual rate of recruitment might be one of a number of cumulative impacts which contribute to the specie's extinction.

It might be reasonably argued that when a specie's population is so small, and threat levels

are so high, that all habitat is critical habitat. If a member of that species is in a location, it is there for a reason. If it is harassed, injured, or killed in that location, it will be just as harassed, injured, or dead as it would be were it to have occurred in "designated" critical habitat.

If endangered and threatened species are adversely impacted, these impacts jeopardize their continued existence regardless of where the impacts occur, designated critical habitat or not. The DEIS, (3.2-23) citing Knowlton et al.(2002) attempts to show how right whales occur mainly in the coastal waters while migrating through the Site A and B USWTRs. Using these same figures, it seems that 5.9 % of right whale sightings were farther than 30 NM of the coast, and that 36.2 % were farther than 10 NM of the coast, and that 20 % of all tagged animal sightings occurred farther than 30 NM of land. This leaves little doubt that the right whale is likely to occur inside and around all of the proposed sites. The potential for right whales being adversely impacted from Navy activities at and around and between the coast and these sites is large. The increase in ship traffic alone, represents a great increase in the threat of ship strikes, a leading cause of death for this species. The Navy itself has injured and killed numerous whales by ship strike, and was responsible for at least one ship strike which led to the deaths of a right whale female and her near-term calf in November, 2004. Please explain why the DEIS failed to mention this incident. It is obviously quite relevant, and should have been included in this discussion. These deaths occurred despite all of the Navy's assurances that it exercises caution and undertakes mitigation measures to avoid such incidents. The DEIS statement (4.2-13) "Based on the Navy protective measures described above and the implementation of mitigation measures during times of anticipated right whale occurrence (described in Chapter 6) Navy vessels are not likely to adversely affect North Atlantic right whales." is a claim that is not reasonable, especially in light of the Navy's recent record involving ship strikes. The DEIS states (4.8-2) that "overall, the percentages of Navy traffic relative to overall large shipping traffic are very small (on the order of 2%)." Yet despite this smaller proportion of traffic, ship strikes for which the Navy is responsible are disproportionately large. Why should it be assumed that the Navy will not injure or kill more right whales, or other endangered species, when its mitigation measures have already proved to be entirely inadequate? Increased ship traffic creates a larger potential for the disruption of important behavior, injury, and death, as well as increased stress levels in right whales and other endangered species. On this basis alone, it is clear that the Site C USWTR jeopardizes the critical habitat of the endangered right whale. The increase in ship traffic at all the proposed USWTR sites jeopardizes the continued existence of right whales and other endangered species.

Entanglement is the other leading cause of death for right whales. It is also a cause of injury and death for other endangered and non-listed species. The DEIS states (4.2-8) "Also with respect to marine mammals, the construction period for installing cable is of limited duration; thus, there would be a limited period during which vessels and construction equipment could come into contact with marine mammals." It then states "Further, the construction period for installing cable is of limited duration; thus, there would be a limited period during which vessels and construction equipment could come into contact with the North Atlantic right whale." These statements are not helpful in assessing the potential for injury and death, as injury and death do not require long time periods to occur in. The installation of cable, particularly in the Site C USWTR, would result in the adverse modification of the designated critical habitat of the right

whale. The installation of the cable at all the USWTR sites would jeopardize the continued existence of the right whale.

The USWTR poses a huge threat to endangered and threatened species. Why has the DEIS indicated that if Site A is selected, it will engage in ESA consultations with NMFS regarding humpback and sperm whales only? What about right whales, and the other endangered species which also may occur in or near the site? It is telling (but not surprising) that the Navy doesn't feel it is necessary to engage in these legally required consultations. It is also outrageous that it cannot be bothered to consult with NMFS even for a species as critically endangered as the North Atlantic right whale.

Considering all the control wires, torpedo air stabilizers, flex hoses, and parachutes that will be "expended" in the USWTR, the DEIS conclusion that the potential for entanglements is small is not believable. As so often seems to be the case in this DEIS, the claim that these expendables would not likely adversely affect listed species or take species protected under the MMPA is not reasonable. Apparently, the DEIS believes that because it said so, it is so. This does not reflect a scientific approach. The same is true in terms of the potential for injury or death due to ingestion of debris.

The quantity of expended items in the USWTR is not small. In fact, it is very large. Some of these expended items contain toxic materials. As just one example, over 10,000 lbs of lead ballast will be left on the ocean floor annually. The DEIS states a number of times that these expended items will "degrade, corrode, and become incorporated into the sediments." It is not clear why this will not have any impacts upon all the different marine species inhabiting or traveling through these waters. What is very clear is the failure of the DEIS to evaluate in a scientific manner the potential for cumulative adverse impacts on all this marine life. That the DEIS shows so little concern over the vast amount of trash, or "expendables" as the DEIS prefers to call it, reveals rather clearly the Navy's lack of any genuine interest in protecting the marine environment.

Regarding the potential of a torpedo striking a marine mammal or sea turtle, the DEIS once again claims there is only a negligible risk, stating (4.2-9) that there are "no recorded/ reported instances of a marine mammal strike by an EXTORP." This is a poor basis on which to make this claim. It is very conceivable that a strike would not be found even were one to occur. Beyond that, why should it be assumed that the Navy would report such an incident if it did occur? Given the Navy's record of denying responsibility for the injuries and deaths of marine mammals due to ship strike, ship shock tests, and sonar exercises, it may be foolish to assume that injuries and deaths from torpedo strike would be reported.

The DEIS (4.8-1), in its discussion of cumulative impacts on marine mammals, does not acknowledge the fact that Navy sonar use will increase the chances that marine mammals (and sea turtles) will be injured and killed because of ship strikes. Right whales, for example, have been shown to increase surfacing when exposed to levels of sound far lower than what will be encountered at or near the site. This behavior makes them more vulnerable to ship strike. Some

whales killed by ship strike have been found to have suffered hearing impairment (Andre et al. 1997). Exposure to sonar and other sound sources in the USWTR is likely to increase the numbers of marine mammals who are injured and killed by ship strike, due to increased hearing loss and masking effects. The DEIS did not address this. Hearing impairment may also increase the chances of marine mammals becoming entangled in fishing gear (Todd et al. 1996). The threat to marine mammals (and sea turtles) of death as bycatch is huge, but will be made even greater by USWTR operations. The DEIS did not address this issue either.

The DEIS discussion of cumulative impacts on marine mammals finishes with the conclusion (4.8-6), "Impacts from this proposed action are not likely to affect the species or stock through effects on annual rates of recruitment or survival. Therefore, the incremental impacts of the proposed construction and use of the USWTR off the east coast of the US would not have any significant contribution to the cumulative effects on marine mammals when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions." This conclusion is preposterous. The second half of the statement rests entirely on the first half, which as pointed out above and below, cannot be justified. Should, for example, even one right whale be killed, or be rendered unable to reproduce or care for its young, or die due to a lowered ability to detect and avoid fishing gear, ships, or other threats, that loss does indeed contribute significantly to the cumulative effects and to the species annual rate of recruitment. It also would directly threaten the species chances of avoiding extinction. The DEIS conclusion is little more than an exercise in denial.

As stated above, a great deal rests on the DEIS assumption that threats to marine mammals and sea turtles will be reduced or eliminated by mitigation measures. Unfortunately, the Navy failed to engage what might have been one of the most effective mitigation measures; selecting a site far away from any concentrations of marine animals. The DEIS (2-20) evaluation of candidate sites does not even mention consideration of marine animal occurrence at or near these candidate sites. The proposed sites the Navy has selected further indicates that the occurrence of marine animals at these sites did not enter into the site selection equation. In fact, it seems that the only thing the Navy was concerned with in its selection of proposed USWTR sites was how convenient it would be for the Navy.

The mitigation measures presented in Chapter 6 and the protective measures detailed in the DEIS (4.2-13) are far from sufficient for the DEIS to conclude that only negligible impacts will occur and that impacts will not effect annual rates of recruitment or the survival of affected species. The effectiveness of visual detection, either from trained observers aboard ships and surfaced submarines, or from trained observers in aircraft, is extremely limited by a number of factors. It is well known that many marine mammal species can remain submerged, some for quite extended periods of time. Sperm whales, for example, can remain submerged for well over an hour. When submerged, marine mammals (and sea turtles) can become impossible to visually detect from ships, submarines, and aircraft. While submerged, these animals do not necessarily remain in the same location. Oftentimes individuals or groups of marine mammals swim while submerged, thereby changing their location. Even if these animals had been visually detected while at the surface, once submerged, visual detection ceases to be effective. Given the duration

periods a number of these species can remain submerged, and the distances they can travel while submerged, visual detection is an extremely unreliable method for determining these animals are not in a given area even under the very best of ocean and weather conditions. In choppy or rough seas, it is often extremely difficult to visually detect marine mammals even when they are at the surface. Weather conditions can further contribute to this difficulty. It is estimated for example, that only one in fifty beaked whales surfacing in the track line of a ship would be sighted in anything stronger than a light breeze. Because of these factors, visual detection of marine mammals, as well as sea turtles, is extremely unreliable even for highly trained and highly motivated individuals. The DEIS does not address the unreliability of this form of detection. Because the Navy's mitigation measures depend almost entirely on visual detection, these measures are, to a very large degree, unreliable and inadequate.

Passive detection for submarines is also a very unreliable method of detecting marine mammals for the simple reason that in order to detect these animals, they must be making enough sound that is distinguishable from background sounds to be detected and then identified as being sounds produced by marine mammals. Obviously, marine mammals do not always produce these sounds. Nor does it appear that sea turtles produce much sound. This method is extremely unreliable. The DEIS does not address this issue.

The question must also be asked; is it possible that Navy shipboard lookouts would ever feel any pressure that could cause them not to see or report seeing marine mammals? Pressure can be felt even if it is only imagined. Pressure can also be perceived even when it is not explicitly exerted. In the real-life situation where training exercises are occurring, it is reasonable to believe that even trained shipboard lookouts might choose not to see, or be hesitant to report the sighting of marine mammals or sea turtles, particularly if they were not absolutely sure of the sighting, or if they felt the sighting was outside of the range presumed to require a change in operations. It is also possible the lookout would not want to be perceived by others as being responsible for disrupting or interfering in the continuation of exercises. Although the DEIS stresses the qualifications and training of the shipboard lookouts, it does not address the "real world" issue of pressure coming from above as well as one's peers.

When marine mammals are detected within 350 yards of the sonar dome, the DEIS (6-3) informs us that "the ship or submarine would limit active transmission levels to at least 6 dB below the equipment's normal operating level for sector search modes." Is this meant to reassure the reader that then everything will be O.K.? The fact that the Navy will not shut down the sonar altogether even when marine mammals or sea turtles are detected at such close range is outrageous. It appears that the Navy simply does not wish to be inconvenienced. What would happen were marine mammals or sea turtles to be detected at 375 yards heading towards the sonar dome, but these animals submerged, and were no longer able to be detected? Would the sonar transmission levels continue unaltered?

Regarding sonar dipping helicopters, the DEIS (6-3) states "If a marine mammal or sea turtle is detected while the helicopter has its sonar pinging actively, pinging would be secured if the marine mammal or sea turtle is closing inside of 200 yards." What would happen in the event

that the marine mammal or sea turtle was traveling in a direction such that were it to continue unaltered, it would enter into the 200 yard zone, but the animal submerged while still at 220 yards? What about 250 yards? What about 300 yards? Presumably, active pinging would be allowed to continue, with the likely consequence an injured or dead marine mammal or sea turtle.

When it is known that the use of naval sonars have resulted in the injury and deaths of marine mammals in numerous instances at vastly greater ranges than 200 and 350 yards, it is an absolute outrage that even under these “close aboard” conditions, the Navy would refuse to shut down the sonar. This refusal clearly highlights the fact that the claim, so often repeated in the DEIS that it takes a “conservative” approach, is a false claim.

The DEIS (6-4) determined that further mitigation measures are unnecessary when a ship or submarine concludes that dolphins are deliberately closing in to ride the vessel’s bow wave. “While in the shallow- wave area of the vessel bow, dolphins are out of the main transmission axis of the active sonar.” Again, this is anything but conservative. Might not the dolphins travel through this main transmission axis to get to the bow? How has the DEIS determined that they will not be exposed to dangerous levels of sound even while they are so close to the source of this sound?

The long-term monitoring program referred to in the DEIS (6-5) will not act to mitigate adverse impacts to marine mammals, as impacts that may be noted will already have occurred.. As for the short-term impacts, why are there no plans to look for marine animals who are behaving abnormally, or are injured or dead, following USWTR exercises? The DEIS states (6-6) that “The USWTR mitigation measures have been developed fully considering the recommendations of the joint NOAA/Navy report on the Bahamas marine mammal stranding event (DoC and DoN, 2001).” This report recommends surveys immediately following operations to check for injured, disabled or dead marine mammals. It also calls for shutdown procedures if marine mammals are detected within the zones of influence. The recommendations in the report also state “The kinds of habitats that attract beaked whales need to be identified and flagged for those who plan sonar operations. This contributes to avoiding beaked whale populations, which is the best form of mitigation.” The DEIS itself states that beaked whales are expected to occur at all three proposed USWTR sites. The Navy’s planned sonar use at these sites is in direct opposition to this recommendation. The lack of shutdown procedures and surveys following operations also do not follow the recommendations of this report. Clearly the DEIS claim is false.

The fact that the DEIS eliminates other mitigation measures such as ramp-ups and third-party observers further demonstrates just how little the Navy is willing to do to ensure that its activities do not result in adverse effects. Particularly absurd is the DEIS (6-4) claim that use of third- party observers compromises security and that they are not necessary. In regards to the use of third-party observers for mitigation and survey efforts, a very important question must be raised. Is it realistic to assume that when the Navy locates marine animals who are behaving unusually, or who are disabled, injured, or dead, that they will then report this sighting, even when there is good reason to believe its own activities caused this condition? In light of the growing public concern about the impacts of Navy sonar on marine mammals, it is unlikely the

Navy would invite more bad publicity by reporting such a sighting. It is also reasonable to assume the Navy would rather not contribute to the growing body of evidence indicating that their sonar use is harming marine life. Given this, it is important to challenge the assumption that the Navy will reliably report when marine animals are negatively impacted by Navy sonar, particularly when the impacts have occurred far offshore, there is little or no chance the animals will strand, and they are unlikely to be observed by anyone else. While third-party observers may observe marine mammals, alive, injured, or dead, which may inconvenience or embarrass the Navy, it could bring transparency and reliability to both mitigation and monitoring efforts. Please address this issue.

Regarding Navy funding of marine mammal research, why did the DEIS fail to address the issue of the potential for research results to be affected because of the source of the funding? This might occur if those conducting the research felt pressure to achieve certain results that would be favorable to the Navy, or if they feared that funding could be cut off if results were unfavorable to the Navy. Pressure may be felt regardless of whether or not it is explicitly applied.

The DEIS states (6-1) "Recognizing that such use may cause behavioral disruption of some species on the range (as outlined in chapter 4) the Navy is seeking a LOA from NMFS." Does the Navy also recognize that this behavioral disruption will not be limited to "some marine mammal species on the range", but may extend well past the boundaries of the range, considering the intensities and numbers of the sound sources? Given this fact, it can be expected that the numbers of marine mammals who experience behavioral disruption will be far greater than the DEIS assumes will occur. Please address this issue.

The DEIS (6-8) indicates that installation of the landside facilities at Site A could occur during the nesting months of the federally threatened loggerhead and green sea turtles, and this could result in temporary impacts. If the Navy was serious about mitigation, it would simply ensure that the installation does not occur during this period. That would be a very straight forward and effective measure. But it appears that the Navy has little interest in mitigation measures that are effective when they may be inconvenient to the Navy. While it may be helpful to log "sightings of and/or injuries to sea turtles that occurred in the construction period", this does not help to mitigate those injuries as they will already have taken place.

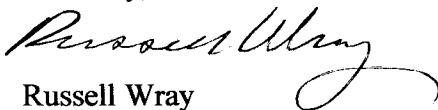
The DEIS (6-5) states that the Navy will be sharing data and coordinating with NMFS to conduct surveys. It will also be submitting requests to NMFS for MMPA letters of authorization as well as engaging in ESA consultations with NMFS. The fact that NMFS was found to have improperly issued the letter of authorization to the Navy for deployment of LFA sonar in 2002, and in doing so had violated the MMPA, the ESA, and NEPA, does not inspire confidence that NMFS will ensure adequate protection for either marine mammals, endangered and threatened species, or their habitats from Navy activities in and around the proposed USWTR site. Nor does the lack of meaningful action on the part of NMFS regarding the protection of the critically endangered North Atlantic right whale from ship strike or entanglement. Why should it be presumed that NMFS will now ensure adequate protection for marine species and habitat from USWTR activities, when they have failed to such an extent in the past? Given the fact that the

mass stranding event which occurred in January, 2005 off the North Carolina coast is so relevant to both the Navy's proposed USWTR and to a greater understanding of the impacts of Navy sonar on marine mammals, why has NMFS taken so long to release information crucial to understanding what exactly the Navy's role was in this stranding? It certainly appears that NMFS is delaying the release of this information. This does not inspire confidence in NMFS's commitment to fulfil its mission of protecting marine species and their habitat. Nor does the recent survey of NMFS scientists conducted by the Union of Concerned Scientists and Public Employees for Environmental Responsibility, which found that 69 % of the survey respondents did not trust NMFS decision makers to make decisions that would protect marine resources and ecosystems. Large numbers of NMFS scientists reported political interference in scientific determinations, and many felt this has undermined NMFS's ability to fulfil its mission. If NMFS's ability to fulfil its mission of protecting marine species and habitat is undermined by political interference, this would have serious implications for the species and habitats which will be impacted by the USWTR.

COAST believes that because of the inappropriate and unsupportable assumptions and extrapolations that have been made use of, a number of conclusions reached in the DEIS are not valid. The DEIS failure to include information critical to the discussion further damages not only the credibility of this DEIS, but the possibility for a realistic assessment of impacts. When the ineffectiveness of the proposed mitigation measures is also taken into account, it is clear that the USWTR does in fact represent a very serious threat to marine life and the marine environment, regardless of which site is finally selected. Because of these very serious flaws, this DEIS must not be mistaken for a detailed environmental analysis.

COAST urges the Navy to begin to see environmental degradation for what it is; a serious threat to the real security of all who live on this planet. The Navy needs to change its course and take an approach which recognizes the right of all the life within Earth's oceans, not only to existence, but to lives lived in a healthy environment. We appreciate the opportunity to comment on the DEIS, and look forward to having our questions and comments responded to.

Sincerely,

A handwritten signature in cursive script, appearing to read "Russell Wray".

Russell Wray