UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

Finding of No Significant Impact for the National Marine Fisheries Service's Issuance of an Incidental Harassment Authorization to the Scripps Institution of Oceanography to Take Marine Mammals by Harassment Incidental to a Low-Energy Marine Geophysical Survey in the South-Eastern Pacific Ocean, May, 2012

National Marine Fisheries Service

BACKGROUND

The National Marine Fisheries Service (NMFS) received an application from the Scripps Institution of Oceanography (SIO), with funding from the National Science Foundation (NSF), for an authorization to take small numbers of marine mammals, by Level B harassment, incidental to its 2012 low-energy marine geophysical (seismic) survey in the south-eastern Pacific Ocean. Pursuant to the Marine Mammal Protection Act (MMPA), authorization for incidental takings shall be granted if NMFS finds that the taking will have 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 (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring, and reporting of such takings are set forth.

In accordance with the National Environmental Policy Act (NEPA, 42 U.S.C. 4321 *et seq.*), NMFS has completed an *Environmental Assessment on the Issuance of an Incidental Harassment Authorization to the Scripps Institution of Oceanography to Take Marine Mammals by Harassment Incidental to a Low-Energy Marine Geophysical Survey in the South-Eastern Pacific Ocean, May, 2012* (EA).

This EA incorporates NSF's *National Environmental Policy Act Analysis Pursuant to Executive Order 12114, Marine Geophysical Survey by the R/V Melville in the South-Eastern Pacific Ocean, May 2012* (NSF, 2012) (hereinafter, the NSF NEPA Analysis) and an associated report prepared by LGL Ltd., Environmental Research Associates (LGL) for NSF titled *Final Environmental Analysis (EA) of a Marine Geophysical Survey by the R/V Melville in the South-Eastern Pacific Ocean off Chile, May 2012* (LGL, 2012) (hereinafter NSF/SIO Report) by reference pursuant to 40 CFR 1502.21 and NOAA Administrative Order (NAO) 216-6 § 5.09(d).,

NMFS has prepared this Finding of No Significant Impact (FONSI) to evaluate the significance of the impacts of NMFS's action. It is specific to Alternative 2 in the EA, identified as the Preferred Alternative. Alternative 2 is entitled "Issuance of an IHA with Required Mitigation, Monitoring, and Reporting Measures." Based on NMFS's review of SIO's proposed activities and measures contained in Alternative 2, NMFS has

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determined that no significant impacts to the human environment would occur from implementing the Preferred Alternative.

SIGNIFICANCE REVIEW

National Oceanic and Atmospheric Administration Administrative Order (NAO) 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 CFR §1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or Essential Fish Habitat (EFH) as defined under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) and identified in fishery management plans?

Response: NMFS does not anticipate that either issuance of the IHA or SIO and NSF's proposed activity would cause substantial damage to the ocean and coastal habitats. Specifically, these temporary acoustic activities would not affect physical habitat features, such as substrates and water quality. Additionally, the effects from vessel transit and the seismic operations of a single vessel would not result in substantial damage to ocean and coastal habitats that might constitute marine mammal habitats. Commercial fishing, military training exercises, and commercial vessel traffic in the study area generate noise throughout the year. The addition of the noise produced by an airgun array is comparatively minor in terms of total additional acoustic energy and brief, in terms of duration of the proposed effort.

NMFS believes that the proposed seismic survey conducted under the requirements of the IHA would have no more than minimal adverse impacts to fish or invertebrates and their habitats, and would have no potential for population-level impacts to any fish or invertebrate species. These temporary acoustic activities would not affect physical habitat features, such as substrates and water quality. The MSFCMA governs marine fisheries management in waters within the U.S. Exclusive Economic Zone (EEZ), and required Federal agencies to consult with NMFS with respect to actions that may adversely impact EFH. The proposed seismic survey would occur in the EEZ off the coast of Chile; there would be no potential impacts to EFH because none is designated within the action area. Because EFH species have been identified and described pursuant to the MSFCMA, NSF has made a determination that this project will not result in adverse impacts to EFH, and therefore NSF is not required to consult with NOAA's NMFS under Section 305(b)(2) of the MSFCMA as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-257). Similarly, NMFS, Office of Protected Resources, Permits and Conservation Division has determined that the issuance of an IHA for the taking of marine mammals incidental to a marine low-energy seismic survey

in the south-eastern Pacific Ocean will not have an adverse impact on EFH, therefore an EFH consultation is not required.

2) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: The proposed issuance of the IHA to authorize the take of marine mammals by Level B harassment incidental to NSF and SIO's seismic survey would not have a substantial impact on biodiversity or ecosystem function within the affected area. The impacts of the seismic survey action on marine mammals are specifically related to the acoustic activities, and these are expected to be temporary in nature and not result in substantial impact to marine mammals or to their role in the ecosystem. The IHA anticipates, and would authorize, Level B harassment only, in the form of temporary behavioral disturbance, of several species of cetaceans. No injury (Level A harassment), serious injury, or mortality is anticipated or proposed to be authorized, and the Level B harassment is not expected to affect biodiversity or ecosystem function.

The EA analyzed the potential for NSF and SIO's seismic survey activity to affect other ecosystem features and biodiversity components, including sea turtles, fish, invertebrates, and oceanographic features. NMFS's evaluation indicates that any direct, indirect, or cumulative effects of issuance of the IHA or the NSF and SIO action would not result in a substantial impact on biodiversity or ecosystem function. In particular, the potential for effects to these resources are considered here with regard to the potential effects on diversity or functions that may serve as essential components of marine mammal habitats. Most effects are considered to be short-term and unlikely to affect normal ecosystem function or predator/prey relationships; therefore, NMFS believes that there will not be a substantial impact on marine life biodiversity or on the normal function of the nearshore or offshore ecosystems of the Pacific Ocean, and specifically the south-eastern Pacific Ocean.

Although there is a relative lack of knowledge about the potential physical (pathological and physiological) effects of seismic energy on marine fish and invertebrates, the available data suggest that there may be physical impacts on egg, larval, juvenile, and adult stages that are in close proximity to the seismic source. Whereas egg and larval stages are not able to escape such exposures, juveniles and adults most likely would avoid it. In the case of eggs and larvae, it is likely that the numbers adversely affected by such exposure would not significantly change the total number of those succumbing to natural mortality. Limited data regarding physiological impacts on fish and invertebrates indicate that these impacts are short term and are most apparent after exposure at close range. It is possible that zooplankton very close to the source may react to the shock wave caused by airgun operations. The pathological (mortality) zone for fish and invertebrates would be expected to be within a few meters of the seismic source to be used for this survey. Little or no mortality is expected. The proposed seismic program in the south-eastern Pacific Ocean is predicted to have negligible to low physical effects on the various life stages of fish and invertebrates. Though these effects do not require

authorization under an IHA, the effects on these features were considered by NMFS with respect to consideration of effects to marine mammals and their habitats, and NMFS finds that the effects from the survey itself on fish and invertebrates are not anticipated to have a substantial effect on biodiversity and/or ecosystem function within the affected area.

3) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response: NMFS does not expect either NMFS's issuance of the proposed IHA or the proposed seismic survey to have a substantial adverse impact on public health or safety. The constant monitoring for marine mammals and other marine life during seismic operations effectively eliminates the possibility of any humans being inadvertently exposed to levels of sound that might have adverse effects. Although the conduct of the seismic survey may carry some risk to the personnel involved (i.e., boat or mechanical accidents during surveys), the applicant and those individuals working with the applicant would be required to be adequately trained or supervised in performance of the underlying activity (i.e., the seismic survey) to minimize such risk to personnel. The survey is not expected to have any adverse impacts on traffic and transportation, as this is only a single working sound source vessel that will be at sea for a relatively short period of time (i.e., approximately 15 days, including approximately 5 to 11 days of airgun operations) over a relatively small geographic area. Also, there is little risk of exposure to hazardous materials or wastes, risk of contracting diseases, or risk of damage from a natural disaster.

4) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: The proposed IHA would authorize some Level B harassment (in the form of short-term and localized changes in behavior) of small numbers of marine mammals incidental to the proposed seismic survey. No injury (Level A harassment), serious injury, or mortality is anticipated or authorized. Behavioral effects may include temporary and short-term displacement of cetaceans from within certain ensonified zones, generally within 350 meters (m) or 670 m (2,198.2 feet [ft]), from the source vessel for the two GI airgun array (90 or 210 cubic inch [in^3] total volume) at 2 m (6.6 ft) tow depth. The monitoring and mitigation measures required for the activity are designed to minimize the exposure of marine mammals to sound and to minimize conduct of the activity in the vicinity of habitats that might be used by certain cryptic marine mammals (i.e., those that are more difficult to detect).

Taking these measures into account, effects on marine mammals from the preferred alternative are expected to be limited to avoidance of the area around the seismic operations and short-term behavioral changes, falling within the MMPA definition of "Level B harassment." Numbers of individuals of all marine mammal species incidentally taken to the specified activity are expected to be small (relative to species abundance), and the incidental take is anticipated to have a negligible impact on the species or stock.

On December 23, 2011, NSF initiated a formal consultation, under section 7 of the ESA, with the NMFS, Office of Protected Resources, Endangered Species Act Interagency Cooperation Division on the proposed seismic survey. On March 7, 2012, NMFS (Permits and Conservation Division) also initiated and engaged in formal consultation with NMFS (Endangered Species Act Interagency Cooperation Division) on the issuance of an IHA under section 101(a)(5)(D) of the MMPA for this activity. These two consultations were consolidated and addressed in a single Biological Opinion (BiOp) addressing the direct and indirect effects of these interdependent actions. In May, 2012, NMFS finished conducting its section 7 consultation and issued a BiOp, and concluded that the NSF action and issuance of the IHA are not likely to jeopardize the continued existence of ESA-listed cetaceans, pinnipeds, and sea turtles and included an Incidental Take Statement incorporating the requirements of the IHA and Terms and Conditions to ensure that there would be no more than minimal impacts to ESA-listed species. Compliance with those Terms and Conditions is likewise a mandatory requirement of the IHA. The BiOp also concluded that designated critical habitat for these species does not occur in the action area and would not be affected by the survey.

5) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: No significant social or economic effects are expected to result from issuance of the IHA or the proposed seismic survey. The primary impacts to the natural and physical environment are expected to be acoustic and temporary in nature, and not interrelated with significant social or economic impacts. The planned seismic survey will not result in directed or lethal takes of marine mammals.

Issuance of the IHA would not result in inequitable distributions of environmental burdens or access to environmental goods. NMFS has determined that issuance of the IHA will not adversely affect low-income or minority populations. Finally, there will be no impact of the activity on the availability of the species or stocks of marine mammals for subsistence uses. Therefore, no significant social or economic effects are expected to result from issuance of the IHA or the proposed seismic survey.

6) Are the effects on the quality of the human environment likely to be highly controversial?

Response: The effects of this action on the quality of the human environment are not likely to be highly controversial. There is no significant controversy about the effects of the seismic survey or the issuance of an IHA on the quality of the human environment.

For several years, NMFS has assessed and authorized incidental take for multiple seismic surveys conducted within the same year and has developed relatively standard mitigation and monitoring measures which the public has vetted during each public comment period for over five years. Moreover, the scope of the action is not is not unusually large or substantial. The mitigation measures are based on NMFS's past experiences and practices with similar projects and consideration of comments submitted on this action

and other similar actions by the Marine Mammal Commission and members of the public.

NMFS published a proposed IHA in the *Federal Register* on March 13, 2012 (77 FR 14744), which allowed the public to submit comments for up to 30 days from the date of publication of the notice. The NSF requested public comment for the EA and made the draft EA available to the public on the NSF Ocean Sciences Environmental Compliance website (http://www.nsf.gov/geo/oce/envcomp/index.jsp). NMFS also made the draft EA available to the public on the NMFS permit website (http://www.nmfs.noaa.gov/pr/permits/incidental.htm#applications). Based on the analysis in the EA, consideration of public comments submitted on the proposed action in the *Federal Register* notice of a proposed IHA, and NMFS experience in issuing prior IHAs for similar actions, NMFS does not consider the effects of this action on the quality of the human environment to be highly controversial.

The Marine Mammal Commission provided comments on proposed mitigation and monitoring measures. NMFS considered the Marine Mammal Commission comments as a component of the marine mammal impacts analysis required by the MMPA in order to reach a determination that only Level B harassment would occur as a result of the proposed NSF/SIO survey, and in making this FONSI. The specific responses to public comments will be provided in the *Federal Register* notice announcing the issuance of the IHA.

No comments raised substantial questions as to whether the survey would cause significant degradation to any component of the human environment, including marine mammals or sea turtles or their habitat. There is no substantial dispute concerning the survey's size, nature or effect. Therefore, NMFS has concluded that the proposed survey and issuance of the IHA are not likely to be controversial.

7) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, EFH, or ecologically critical areas?

Response: SIO's proposed low-energy marine seismic survey will take place in the south-eastern Pacific Ocean where no historic and cultural resources, park land, prime farmlands, wetlands, or wild and scenic rivers are present. NMFS does not expect the NSF and SIO survey to have any substantial impacts to unique areas, nor does NMFS expect the authorization to have a significant effect on marine mammals that may be important resources in such areas. Similarly, NMFS does not expect its issuance of the IHA or the proposed SIO survey to have any impacts to EFH as described in the response to question 1 above. Detailed information about the affected environment, marine mammals, other marine life, and all potential adverse direct, indirect, and cumulative impacts related to the proposed action are provided in the EA.

To the extent that marine mammals are important features of these resource areas, the potential temporary behavioral disturbance of marine mammals might result in short-term behavioral effects on cetaceans and pinnipeds within ensonified zones, but no long-term displacement of marine mammals, endangered species, or their prey is expected as a result of the NSF and SIO action or the issuance of an Incidental Take Authorization for marine mammals.

8) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: The effects of the action on the human environment are not likely to be highly uncertain or involve unique or unknown risks. The exact mechanisms of how different sounds may affect certain marine organisms are not fully understood, but there is no substantial dispute about the size, nature, or effect of this particular action. While NMFS's judgments on impact thresholds are based on somewhat limited data, enough is known for NMFS and the regulated entity (here NSF and SIO) to develop precautionary monitoring and mitigation measures to minimize the potential for significant impacts on biological resources and to support the necessary findings. The multiple mitigation and monitoring requirements are designed to ensure the least practicable impact on the affected species or stocks of marine mammals and also to gather additional data to inform future decision-making. NMFS has been authorizing take for similar types of seismic surveys for years, and monitoring reports received pursuant to the requirements of the authorizations have indicated that there were no unanticipated or unauthorized impacts (i.e., nothing exceeding Level B harassment) that occurred as a result of the previously conducted seismic surveys.

9) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: The NSF and SIO's conduct of the low-energy seismic survey in the south-eastern Pacific Ocean and NMFS's action of issuing an IHA to SIO that authorizes take of a small number of marine mammals incidental to the conduct of SIO's seismic survey, are interrelated. These actions are not expected to result in cumulatively significant impacts when considered in relation to other separate actions with individually insignificant effects.

The EA analyzes the impacts of the seismic survey in light of other human activities within the study area. In the EA, the NSF concluded and NMFS agrees that although the airgun sounds from the seismic survey have higher source levels than the sounds generated from some other human activities in the area, airgun sounds are pulses and will be carried out for only approximately 5 to 11 days, in contrast to those from other sources that have lower peak pressures but occur continuously over extended periods of time (e.g., vessel noise). Thus, the combination of SIO's operations with existing commercial shipping, commercial fishing, and military training exercises is expected to result in no more than minor and short term impacts from the proposed seismic survey in the south-eastern Pacific Ocean in terms of overall disturbance effects on marine mammals.

Human activities and foreseeable projects in the south-eastern Pacific Ocean include commercial and recreational vessel traffic, fishing, and oil and gas exploration and production. These activities, when conducted separately or in combination with other activities, can affect marine mammals in the study area. Any cumulative effects caused by the addition of the seismic survey impacts on marine mammals will be extremely limited and will not rise to the level of "significant," especially considering the timeframe of the proposed activities and the location of the proposed survey area offshore of Chile. For the majority of the proposed trackline, the *Melville* is unlikely to encounter any additional human activities, and thus the degree of cumulative impact will be minimal. Any such effects related to the cumulation of human activities near the start and end of the trackline will have no more than a negligible impact on the marine mammal populations encountered.

NMFS has issued Incidental Take Authorizations for other seismic surveys (to the oil and gas industry, NSF, USGS, and other organizations) that may have resulted in the harassment of marine mammals, but the surveys are dispersed both geographically (throughout the world) and temporally, are short term in nature, and all include required monitoring and mitigation measures to minimize impacts to marine mammals and to minimize other potential adverse environmental impacts in the activity area. There are no other NSF-sponsored seismic surveys scheduled for the south-eastern Pacific Ocean in 2012 and therefore, NMFS is unaware of any synergistic impacts to marine resources associated with reasonably foreseeable future actions that may be planned or occur within the same region of influence. The impacts of SIO's proposed seismic survey in the south-eastern Pacific Ocean are expected to be no more than minor and short-term with no potential to contribute to cumulatively significant impacts.

10) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: The actions proposed by NMFS and NSF/SIO are not likely to adversely affect cultural resources along the coast of Chile, as the seismic survey would occur on the high seas. As described in question 5 above, implementation of mitigation and monitoring measures in the IHA proposed to be issued to SIO ensures that there will not be significant social or economic impacts on the coastal inhabitants of the south-eastern Pacific Ocean. The NSF/SIO proposed action is not likely, directly or indirectly, to adversely affect places or objects listed in or eligible for listing in the National Register of Historic Places, or other significant scientific, cultural or historical resources as none are known to exist at the site of the proposed action and because the action is not expected to alter any physical resources.

11) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: The primary concern regarding the introduction or spread of a non-indigenous species from the proposed seismic survey is through ballast water exchange.

The U.S. Coast Guard (USCG) is responsible for ensuring that ships are in compliance with all international and U.S. national ballast water requirements to prevent the spread of non-indigenous species; the vessel (*Melville*) involved in this seismic survey will follow all those ballast water requirements.

Therefore, neither NMFS's issuance of the IHA nor NSF and SIO's proposed survey is expected to result in the introduction or spread of non-indigenous species, as all international and national preventive measures would be implemented.

12) Is the proposed action likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Response: The proposed action will not set a precedent for future actions with significant effects or represent a decision in principle. To ensure compliance with statutory and regulatory standards, NMFS's actions under section 101(a)(5)(D) of the MMPA must be considered individually and be based on the best available information, which is continuously evolving in the field of underwater sound. Moreover, each action for which an Incidental Take Authorization is sought must be considered in light of the specific circumstances surrounding the action, and mitigation and monitoring may vary depending on those circumstances. As mentioned above, NMFS has issued many authorizations for seismic research surveys. A finding of no significant impact for this action, and for NMFS's issuance of an IHA, may inform the environmental review for future projects but would not establish a precedent or represent a decision in principle about a future consideration.

13) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: NMFS does not expect the proposed action to violate any Federal law or requirements imposed for the protection of the environment, as NMFS and NSF have fulfilled their section 7 responsibilities under the ESA (see response to question 4 above), and NSF and SIO has complied with the MMPA (by submitting an application for an IHA) for this action. Also, all requirements have been met to prevent the spread of non-indigenous species into the action area (see response to question 11 above).

14) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: The NSF and SIO low-energy seismic survey and NMFS's issuance of an IHA are not expected to result in any significant adverse effects on species incidentally taken by harassment, or any cumulative adverse effects that could have a substantial effect. NMFS has issued Incidental Take Authorizations for other seismic research surveys (to oil and gas companies, NSF, and other organizations) that may have resulted in the harassment of marine mammals, but they are dispersed both geographically (throughout the world) and temporally, are short-term in nature, and all use monitoring and mitigation measures to minimize impacts to marine mammals and

other protected species. There will be five other research seismic surveys (by the Lamont-Doherty Earth Observatory [L-DEO]) that are scheduled for the winter, spring, and summer of 2012 in the northwest Pacific (Shatsky Rise), central Pacific (Line Islands), and northeast Pacific (off of British Columbia, Washington, and Oregon). In spring, summer, and fall of 2011, NSF and USGS sponsored seismic surveys onboard the *Langseth* in the Eastern Tropical Pacific (ETP), central Gulf of Alaska (GOA), western GOA, Bering Sea, Chukchi Sea, and Line Islands. Two NSF-sponsored seismic surveys onboard the *Langseth* occurred in the Northwest Pacific Ocean area (i.e., Shatsky Rise) in the summer of 2010 and in the eastern tropical Pacific (ETP) off of Costa Rica in April, 2011, and two other NSF-sponsored low-energy seismic surveys took place on the R/V *Thomas G. Thompson* in the western tropical Pacific in the winter of 2011 and on the *Melville* in the ETP in the fall of 2010. L-DEO, University of Alaska Fairbanks, Rice University, and SIO have conducted seismic surveys in the Pacific and Atlantic Ocean in 2008, 2009, and 2010. NMFS does not believe the effects of this action combined with effects from the other surveys to result in cumulative adverse effects.

As described in the EA, anthropogenic activities such as commercial and recreational vessel traffic, fishing, and oil and gas exploration and production could adversely affect marine mammals and sea turtles in the survey area. However, airgun sounds are pulses (i.e., intermittent) and will be carried out for only approximately 5 to 11 days during the program, in contrast to those from other sources that occur continuously over extended periods of time (e.g., vessel noise). NSF and SIO's airgun operations are unlikely to cause any large-scale or prolonged effects. Thus, the seismic survey will add little to activities in the proposed seismic survey area, take of only small numbers of each species by behavioral disturbance are proposed to be authorized, and no injury, serious injury, or mortality is anticipated or proposed to be authorized.

Because of the relatively short time that the project area will be ensonified, NMFS anticipates that the proposed action will not result in cumulative adverse effects that could have a substantial effect on any species, such as cetaceans and pinnipeds in the area (see responses to questions 4 and 9 above). The survey would also not be expected to have a substantial cumulative effect on any sea turtles, fish, or invertebrate species. Although some loss of fish and other marine life might occur as a result of being in close proximity to the seismic airguns, this loss is not expected to be significant. Additionally, adult fish near seismic operations are likely to avoid the immediate vicinity of the source due to hearing the sounds at greater distances, thereby avoiding injury. Due to the relatively short time that seismic operations will be conducted in the area (approximately 15 days, including approximately 5 to 11 days of airgun operations), small sound source, avoidance behavior by marine mammals in the activity area, and implementation of required monitoring and mitigation measures, NMFS does not anticipate that the proposed action will result in cumulative adverse effects that could have a substantial effect on marine mammals or other marine species. Therefore, the proposed action is not expected to contribute to or result in a cumulatively significant impact to marine mammals or other marine resources.

DETERMINATION

In view of the information presented in this document and the analysis contained in NMFS's supporting EA, NMFS determined that the issuance of an IHA for the take, by Level B harassment, of small numbers of marine mammals incidental to NSF and SIO's May, 2012, seismic survey in the south-eastern Pacific Ocean will not significantly impact the quality of the human environment, as described above and in the EA. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement for this action is not necessary.

MAY - 2 2012

Helen M. Golde
Acting Director
Office of Protected Resources
National Marine Fisheries Service

Date