

DEPARTMENT OF TRANSPORTATION
MARITIME ADMINISTRATION
COOPERATIVE AGREEMENT

PROJECT NUMBER: DTMA1H04002

MODIFICATION: 0008

TITLE: National Academy of Sciences, National Research Council
Commission on Engineering and Technical Systems,
Marine Board

FUNDING DATA: 70X1750000 2007 70072C2107FGAXX 921072FGAO
25500 0000000000 M-7-072F - \$80,000

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AGENCY NAME AND ADDRESS: DOT/Maritime Administration
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400 Seventh Street, SW., Room 7310
Washington, DC 20590

MODIFICATION AUTHORITY: Article 7, paragraph A; 4

DESCRIPTION:

1. By this modification, additional funding in the amount of \$80,000.00 is hereby obligated to the agreement in accordance with Article 7. A list of contracting agencies, dollar amounts contributed and Interagency Agreement numbers are provided as Attachment A to this modification. The following changes are made:
2. The \$80,000.00 is from the Alaska Department of Environmental Conversation (ADEC) for a Risk Assessment associated with oil spills from vessels transiting the Aleutian Islands, Alaska.
3. Article 4, Accounting and Appropriation data are changed as shown to reflect the additional funding provided by this modification.

70X1750000 2007 70072C2107FGAXX 921072FGAO 25500 0000000000 M-7-
072F - \$80,000.00

TOTAL OBLIGATED \$80,000.00
\$80,000.00

4. Article 7: a Paragraph (A) (2) delete \$1,194,000.00 and replace with \$1,274,000.00
5. All other terms and conditions of the Cooperative Agreement remain unchanged.

DEPARTMENT OF TRANSPORTATION
Maritime Administration



Delores Bryant
Agreements/Contracting Officer
Date: 12/04/07

ATTACHMENT A
SOURCE OF FUNDING CY'05 OBLIGATIONS

MOD.0001

Department of Transportation
Maritime Administration
TOTAL OBLIGATED

\$10,000.00
\$10,000.00

U.S. Coast Guard

Reimb. No. M-5-052C

\$100,000.00

Reimb. No. M-5-052B

\$654,000.00

TOTAL OBLIGATED

\$754,000.00

MOD.0002

U.S. Navy
(Supervisor of Salvage)
Reimb. No. M-5-052F
TOTAL OBLIGATED

\$25,000.00
\$25,000.00

SOURCE OF FUNDING CY'06 OBLIGATIONS

MOD.0004

Department of Transportation
Maritime Administration
TOTAL OBLIGATED

\$10,000.00
\$10,000.00

U.S. Coast Guard

Reimb. No. M-6-062C

\$100,000.00

TOTAL OBLIGATED

\$100,000.00

Naval Sea Systems Command

Reimb. No. M-6-062F

\$ 25,000.00

TOTAL OBLIGATED

\$ 25,000.00

ATTACHMENT A
SOURCE OF FUNDING CY'07 OBLIGATIONS

MOD.0006

Department of Transportation

Maritime Administration

\$10,000.00

TOTAL OBLIGATED

\$10,000.00

U.S. Coast Guard

Reimb. No. M-7-072B

\$100,000.00

TOTAL OBLIGATED

\$100,000.00

MOD.0007

Department of Transportation

Maritime Administration

\$10,000.00

TOTAL OBLIGATED

\$10,000.00

U.S. Coast Guard

Reimb. No. M-7-072C

\$50,000.00

TOTAL OBLIGATED

\$50,000.00

ATTACHMENT A
SOURCE OF FUNDING CY'08 OBLIGATIONS

MOD.0008

Alaska Dept. of Environmental Conversation

\$80,000.00

Reimb. No. M-7-072F

\$80,000.00

Risk of Oil Spills in the Aleutian Islands: A Study to Design a Comprehensive Risk Assessment

Statement of Task:

This 8 month project will examine available data and evidence about the risk of oil spills from vessels transiting the Aleutian Islands, determine the information needed to conduct a comprehensive risk assessment, recommend the appropriate framework for such an assessment, and identify how a comprehensive risk assessment could be conducted in discrete steps. The framework would establish the most appropriate and scientifically rigorous risk assessment approach possible given available data and modeling capability. The steps would provide a logical sequence of building blocks toward a comprehensive assessment that could be conducted as future funding becomes available.

Work Plan:

The first task of the project will be to form a committee of experts in fields of marine safety, marine environmental protection, and risk assessment. The committee will require independent experts who are familiar with both classical risk assessment techniques or methodologies and the issues involved in previous marine risk assessments and who are free of any conflict of interest. Because this project is a scoping study for a comprehensive risk assessment, individuals will be sought who do not plan to propose on the comprehensive assessment.

Nominees will be sought for the committee from a wide range of stakeholders and experts associated with the Marine Board and the National Research Council. Even as staffs are developing a list of nominees to the committee, they will gather relevant background documents and related literature and will begin contacting organizations that could provide supplemental information about transits of the Aleutian Islands not already collected.

The committee will meet three times, including a multi-day meeting in Alaska, to hear from stakeholders and review available data pertinent to the committee's task. It is expected that the committee would meet once in Washington to participate in the NRC review of potential sources of bias and conflict, discuss its charge, develop a work plan, consult with other experts in marine risk assessment, and hear from national and international stakeholders.

A second meeting will be held in Alaska to discuss issues with local and state stakeholders such as specific hazards presented by Aleutian shipping operations and the range of possible mitigation measures available. The committee will hold its final meeting in Washington. The final meeting is expected to be a closed session for the committee to develop its findings and recommendations. Committee and staff will then formalize the report and submit it to the NRC Report Review Committee (RRC) for report review. When the RRC process is complete, the report will be delivered to the sponsor.

Policy Context:

Maritime trade between the United States and Asia has been growing by about five percent annually over the last decade and is forecast to continue to grow at similar rates in the coming decade. Many of the vessels trading between northern Asia and the northern Pacific coast ports of the United States follow the great circle route, which passes through the Unimak Pass at the eastern end of the Aleutian Islands chain. This remote 3-4 mile wide gap in the Aleutian Islands just west of Unimak Island is roughly 1,300 miles due west of Juneau and 800 miles southwest of Anchorage.

On December 8, 2004, the bulk grain ship M/V Selendang Ayu lost power, grounded, and broke up during a storm at Unalaska Island and spilled about 335,000 gallons of heavy fuel oil. The incident gained international attention because 6 crew members were lost when a helicopter attempting to evacuate members of the Selendang Ayu crew crashed into the sea. This incident has also focused attention on the oil spill risks posed by vessels transiting the Aleutian Islands. Approximately seven years earlier, another freighter ran aground at Unalaska Island and spilled 40,000 gallons of fuel oil. The Aleutians are home to the United States' largest and most valuable commercial fishing grounds and the Alaska Maritime National Wildlife Refuge.

According to a recent analysis of available shipping data, approximately 3,100 vessels pass through the Aleutian Islands annually, or about 8-9 vessels daily. Approximately 20 voyages (0.7%) are made by tankers, which carry, on average, 400 million gallons of oil as cargo and fuel. About 1,200 transits (39%) are made by container ships, which typically carry 1.6 million gallons of oil as fuel. Approximately 1,300 transits (41%) are made by freighters similar to the Selendang Ayu, which typically carry 470,000 gallons of oil as fuel. In addition, about 400 fishing vessels operate in and around the Aleutians as well as numerous ferries, cruise ships, tugs, and barges.

The M/V Selendang Ayu incident highlighted the largely unappreciated scale of vessel traffic in the Aleutians and Unimak Pass, and has spawned numerous proposed solutions and ideas directed at both better prevention and response methods. Because of the remoteness of the site, response times tend to be substantial. The nearest USCG base with search and rescue capabilities is located at Kodiak, which is almost 500 miles away. The Coast Guard, however, does not now have the ability to directly manage this shipping traffic or to quickly respond to major casualties or oil spills with appropriate assets. Until the incident occurred, the Coast Guard was not collecting ongoing estimates of the volume of traffic, although it had conducted traffic counts during two months in 2004. Since the incident, the Coast Guard has installed Automatic Identification System monitoring devices, which record the vessel by its registered name, speed, bearing, and cargo. The spill has raised concerns in Alaska about the risk of additional events in the future. An environmentally oriented interest group in Alaska - the Shipping Safety Partnership - has recommended "that a comprehensive vessel traffic assessment be conducted for the Aleutians-- a detailed, statistical analysis of the frequency and locations of possible vessel casualties, identifying critical areas of concern and potential mitigation measures." The U.S. Coast Guard is working with the state of Alaska, through the Dept. of Environmental Conservation, to assemble a stakeholder group, including public and private organizations, to fund the risk assessment. Alaska has agreed to fund this project to design the assessment.

Technical Context:

A considerable literature exists on risk assessment that would be pertinent to this project, and a number of specific risk assessments have been conducted in the maritime context, including a major risk assessment for Alaska's Prince William Sound. A key issue for this study is assessing the risk of another incident occurring at the Unimak Pass. Since July 2005, the Coast Guard has been collecting traffic data, which would allow estimation of transits by vessels over 300 gross tons on international voyages through the pass by date and in association with prevailing weather conditions for the months since data collection began. The State of Alaska commissioned a study that assembled records from a variety of sources to estimate the scale and nature of vessel traffic and the frequency of vessel incidents. The study also evaluated gaps in existing data and recommended needed improvements. It is possible that major liner companies would share additional information from company records, but most of these companies are foreign-owned and are under no obligation to share information.

These companies or their representatives would need to be contacted to determine whether they would share enough information at a sufficiently detailed level to allow the development of a reliable risk estimate. Additional data sources could include Lloyd's List, marine exchanges in major ports, and shipping associations.

The U.S. Coast Guard collects vessel casualty information for domestic vessels operating in the Aleutians and foreign vessels transiting U.S. waters. Vessel casualties are those affecting the seaworthiness of the vessel. Between 1991 and 2004, 45 foreign casualties were reported throughout the Aleutian chain of islands, but this may be an undercount. Of these casualties, 16 were loss of maneuverability incidents. Loss of maneuverability preceded the break up of the Selendang Ayu. During this same period, 415 casualties were reported for U.S. vessels, most of which were fishing vessels.

Federal Advisory Committee Act (FACA)

The Academy has developed interim policies and procedures to implement Section 15 of the Federal Advisory Committee Act, 5 U.S.C. App. § 15. Section 15 includes certain requirements regarding public access and conflicts of interest that are applicable to agreements under which the Academy, using a committee, provides advice or recommendations to a Federal agency. In accordance with Section 15 of FACA, the Academy shall submit to the government sponsor(s) following delivery of each applicable report a certification that the policies and procedures of the Academy that implement Section 15 of FACA have been substantially complied with in the performance of the contract/grant/cooperative agreement with respect to the applicable report.

Public Information About The Project

In order to afford the public greater knowledge of Academy activities and an opportunity to provide comments on those activities, the Academy may post on its website (<http://www.national-academies.org>) the following information as appropriate under its procedures: (1) notices of meetings open to the public; (2) brief descriptions of projects; (3) committee appointments, if any (including biographies of committee members); (4) report information; and (5) any other pertinent information.

Estimate of Costs

It is estimated that the full cost of the activities described above will be \$279,900 as for the period May 1, 2007 through November 30, 2007. The USCG is requested to provide \$50,000, with the remainder to be provided by the Alaska Department of Environmental Conservation