

COOK INLET RISK ASSESSMENT PROJECT

Monthly Progress Report for Contract #HSCG84-12-C-B17024

Submitted by Nuka Research and Planning Group, LLC (Nuka Research)
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This is a Monthly Progress Report submitted to the U.S. Coast Guard for the Cook Inlet Risk Assessment Project (#HSCG84-12-C-B17024). This report includes an account of the work completed from September 15, 2012 – August 31, 2013, as well as identification of any problems encountered or anticipated. Wherever necessary, we also discuss any budget or scheduling impacts and proposed remedies.

Overview

The U.S. Coast Guard contracted Nuka Research to provide procedural expertise and project management during the preparation of the Cook Inlet Risk Assessment. This project began on September 15, 2012. The final project deliverable will be a report presenting recommended risk reduction options for vessel traffic in Cook Inlet.

On August 15, 2013, Nuka Research requested a no-cost extension of the contract until September 30, 2014. As noted, the reasons for this request are to allow for the testing of an ice radar during the 2013-2014 ice season, allow for more time for engagement of the Advisory Panel in the final recommendations from the Cook Inlet Risk Assessment, and allow for the development of a single final project report.

Task Details

This section provides an update on the status of the eight project tasks identified in the contract. The tasks are sequential and build directly on each other.

Task 1: Plan and Conduct Consequence Analysis Workshop

This task is now 100% complete.

Task 2: Develop Consequence Analysis Report

This task is now 100% complete.

Task 3: Solicit and Describe Risk Reduction Options

The risk reduction options identified at the February 2013 Advisory Panel meeting have been divided into two groups: those recommended for immediate or ongoing implementation and those that require additional research or analysis. A [document describing the first set of RROs](#) was released and distributed with the newsletter in early July after review by the Advisory Panel and Management Team. In August

2013, with approval from the Management Team, the [descriptions of the risk reduction options](#) requiring additional consideration were finalized and distributed to the full project distribution list via the project newsletter.

Task 4: Estimate the Benefits of Risk Reduction Options

The Management Team met on August 13, 2013 and approved the proposed steps to evaluate the risk reduction options that were slated for additional analysis or consideration. The next steps essentially incorporate estimating the benefits of the proposed options (Task 4), costs (Task 5), and ease of implementation (Task 6) as appropriate for each proposed risk reduction option.

The risk reduction options are summarized below. Scopes of work and work authorizations have been developed and issued to subcontractors.

Towing Analysis

In order to determine whether *additional* towing resources are needed, the project will analyze the ability of the *current* towing resources and ability of a deep draft vessel to self-arrest through answering the following research questions:

- How often would a tug of opportunity be available to control a deep draft vessel that has lost propulsion or steering in Cook Inlet?
- How often could a deep draft vessel that has lost propulsion or steering successfully secure its position by anchoring in lower Cook Inlet?

Construct Cross-Inlet Pipeline from Drift River to Nikiski

With the expectation that the proposed pipeline from Kustatan to Nikiski would displace the need for all cross-Inlet tanker transits, Nuka Research and Pearson Consulting will work with The Glosten Associates and Northern Economics, Inc. to answer the following questions:

- To what extent, if any, will oil spill risk be reduced by moving oil across the Inlet by pipeline instead of tank vessel?
- What are the relative costs and benefits of constructing the subsea pipeline to change the way oil is moved across Cook Inlet?

Enhance Situational Awareness by Transmitting Weather Information via AIS

The next step for the use of AIS to enhance situational awareness in Cook Inlet is to use this technology to deliver weather information directly to the bridge of a vessel. MXAK has been working with the Alaska Ocean Observing System (AOOS) to install the necessary technology and, through the USCG and NOAA, develop the necessary permits and protocols. One of three new combined weather/AIS station was installed in Homer in 2012. Nuka Research and Pearson Consulting will work with MXAK and its project partners to understand how the system in Homer is working and gain information from different perspectives (including mariners) about how the protocols developed (frequency of transmission, length and nature of transmission, etc.) are working and how the information is being applied.

Improve Ice Monitoring Capability

Research will be conducted to determine the best way to improve upon the ice monitoring procedures already established in Cook Inlet. This will include gaining an understanding of how the current camera system is working from different perspectives as well as conducting a review of ice radar systems, in particular the Sigma S6 Ice Navigation system, that may significantly enhance the development and dissemination to mariners of timely information about the nature and location of ice. Based on the feedback received, a demonstration of the Sigma S6 (or similar) system will be developed and potentially implemented, pending the results of the research, costs and feasibility, and Management Team approval.

Encourage Third Party Inspections or Audits of Workboats

There are audit programs available through the International Marine Contractors Association (IMCA) and the American Waterways Operators' Responsible Carrier Program, which establish codes of practice that could be adopted by all Cook Inlet vessel operators. Operators in Cook Inlet will be surveyed to determine the type and frequency of audits (if any), why operators do or do not choose to use an audit program, which one they use (if any) and why, problems they have encountered in implementing such a program in the past, and any barriers to the use of such programs with incentives or suggestions that would overcome these barriers.

Task 5: Estimate the Costs of Risk Reduction Options and Develop Cost-Benefit Ratios

This task relates directly to the work described in Task 4, as noted above. (Northern Economics, Inc. will conduct a cost-benefit analysis for the proposed cross-Inlet subsea pipeline.)

Task 6: Assess the Ease of Implementation of Risk Reduction Options

This task relates directly to the work described in Task 4, as noted above.

Task 7: Assess Unintended Consequences of Risk Reduction Options

This task relates directly to the work described in Task 4, as noted above. The Advisory Panel will also be asked to consider potential unintended consequences of the proposed risk reduction options.

Task 8: Prioritize Risk Reduction Options, Develop Recommendations, and Prepare Final Report

The risk reduction options have been organized into those slated for immediate or ongoing implementation and those that require further consideration (based on the research and analysis described above). The Advisory Panel and Management Team will further refine this prioritization. The final recommendations and report will be based on the outcome of Tasks 4-7. Work on the final report has not yet begun.