

# ***Alaska Spill Response Tactics Manual Project*** (Phase I)

Draft Summary Report TO ADEC

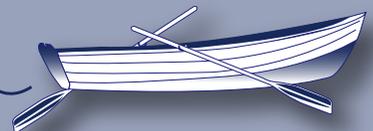
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### Introduction

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This draft report to the Alaska Department of Environmental Conservation (ADEC) contains the deliverables for Tasks I and II of the Alaska Spill Response Tactics Manual (Phase I) project under Contract 18-8003-28. This report summarizes the research conducted by Nuka Research and Planning Group, LLC (Nuka Research), the contractor, in reviewing available national and international sources of oil spill tactics manuals as potential reference documents for the ADEC Alaska Spill Response Tactics Manual (ASRTM).

### Project Background

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In the State of Alaska, spill response tactics manuals serve as key execution documents in the event of an oil or hazardous substance release. The regulated oil industry has developed several different tactics manuals in order to meet State contingency planning requirements. These include tactics manuals that have been developed by the major Alaskan spill response organizations. On the national and international scale, response tactics and guidance manuals have also been developed by the U.S. Coast Guard, the Arctic Council (Emergency Prevention, Preparedness & Response Program), response agencies in all other U.S. and West Coast states, and National Response Team agencies such as the National Oceanic and Atmospheric Administration (NOAA).

The purpose of this project is to coordinate the development of a statewide spill response tactics manual for use by the spill response community, including federal, state, local, industry, and spill cooperatives throughout Alaska. The end product would be available for general use by the spill response community in Alaska, and may also serve as a means for meeting contingency planning requirements. The manual is intended to become the standard tactical reference for oil spill planning and response activities in Alaska. The standardized tactical descriptions contained in the manual can be referenced in contingency plans, making them simpler, and will facilitate mutual aid among response organizations. The manual may eventually become part of the Alaska Federal and State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (Unified Plan).

## Methods

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Phase I of the ASRTM development project required a nationwide search and comparison of tactics information from industry, spill cooperatives, regulatory agencies, and other pertinent sources. This document reports on the information obtained, and identifies copyright issues related to the use of the information in the ASRTM. This report also presents recommendations on a standardized format and process for developing the manual.

### *Task I – Research and Coordination*

Task I required evaluation of the following documents:

1. Alaska Clean Seas (ACS) Technical Manual;
2. Cook Inlet Spill Prevention and Response Inc. (CISPRI) Technical Manual;
3. South East Alaska Prevention and Response Organization (SEAPRO) Tactics Manual and Responder Handbook;
4. Alaska Chadux Corporation tactics document;
5. Alyeska Pipeline Service Company Ship Escort and Response Vessel System (SERVS) tactics documents;
6. The General Tactics part of the Alaska Geographic Response Strategies (GRS) portions of the subarea plans.
7. Field Guide for Oil Spill Response in Arctic Waters (Arctic Council EPPR); and
8. Field Guide for the Protection and Cleanup of Oiled Arctic Shorelines (Environment Canada).

This list was expanded to include other documents that could serve as models or resources for the development of the ASRTM. Task I also required the determination of any potential copyright issues regarding the inclusion of proprietary data into the ASRTM.

### *Task II – Review and Evaluate Existing Spill Response Tactics documents*

Task II required a review of existing tactics manuals to determine the best available sources of information for developing the ASRTM. A comprehensive and comparative review of the documents assembled under Task I was conducted and the usefulness of each document in preparing the ASRTM was noted. Finally, suggestions for the format and content of the ASRTM were developed.

## Results

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### *Task I – Research and Coordination*

Thirty-three (33) sources of tactics reference material, including existing spill response tactics manuals as well as field response guides, oil spill contingency plans, general reference documents, and internet reference sites were reviewed under this task.

Table 1, included at the end of this report, summarizes the outcome of Nuka Research’s work on Task I. The table provides the following information for each reference document:

- Title;
- Bibliographic information;
- Availability of online version and internet address, if applicable;
- Format (document size and binding) of printed/hard copy version;
- Point of contact for copyright/access information;
- Copyright assessment; and
- Summary of document contents, describing in general terms the layout, scope of information and usefulness in developing the ASRTM.

The results of Nuka Research’s copyright inquiries varied considerably. Several organizations were very supportive of the project and willing to allow ADEC full access to reprint the referenced information, such as CISPRI, ACS, USCG, EPA. Other entities requested additional information about the project before providing copyright permission. Overall, we believe that most copyright issues can be resolved favorably, although additional support or intervention by ADEC may be necessary in some cases to assure copyright holders of the final disposition of the ASRTM. Nuka Research will continue to work through these copyright issues and will request support from the ADEC Project Manager as necessary.

### *Task II – Review and Evaluate Existing Spill Response Tactics Documents*

Task II required assembling a list of existing tactics manuals to determine the best available sources of information for developing the ASRTM. In cooperation with the ADEC Project Manager, Nuka Research conducted a comprehensive and comparative review of the selected documents and developed this report to summarize our findings under Task II.

Table 2 summarizes the response tactics information provided in each of the reference documents listed in Table 1. Table 2 classifies each document using the

following categories to identify which types of oil spill response tactics/information are included (shaded areas indicate the inclusion of pertinent information):

- Safety
- Oil Spill Surveillance and Tracking
- Mechanical Response
  - ◇ Still-water
    - Containment/Exclusion Booming
    - Active Recovery/Skimming
    - Passive Recovery/Sorbants
  - ◇ Moving-water
    - Diversion Booming
    - Deflection Booming
    - Active Recovery/Skimming
  - ◇ Frozen-water
    - Broken-ice
      - Containment
      - Recovery
    - Solid-ice
      - Containment
      - Recovery
  - ◇ Land-based
    - Containment (Barriers, Berms, Dykes and Dams)
    - Active Recovery
    - Passive Recovery
    - Special Habitat (Tundra, Permafrost)
  - ◇ Primary Storage
  - ◇ Transfer of Recovered Fluids
- Non-mechanical Response
  - ◇ In-Situ Burning
  - ◇ Chemical Dispersion
  - ◇ Bioremediation
- Wildlife Response
- Clean-up
  - ◇ Shoreline
  - ◇ Land-based
- Waste Management
- Logistics

## Recommendations

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### *Organization*

We suggest that the outline used in Table 2 above, might form a logical basis for organizing the ASRTM. We visualize the document consisting of general sections, such as *Safety* or *Mechanical Response*. Each section might be further broken into sub-sections, such as *Still-water* or *Moving-water*. Each sub-section would be divided into chapters for each category of tactics.

Each chapter would begin with an Introduction where the tactics within the chapter are discussed in general terms and compared as to their applicability. Comparisons could be done in tables similar to those in the *Field Guide for Oil Spill Response in Arctic Waters*. The remainder of the chapter would be comprised of individual tactic sheets. Each tactic sheet would contain the following headings:

- Tactic Description;
- Objectives and Implementation;
- Equipment and Personnel Resources;
- Capacities for Planning;
- Deployment Considerations and Limitations; and
- References to Other Tactics.

We also suggest that a simple icon be developed for each tactic, similar to the ones used in the GRS documents. This icon could be displayed on maps in GRS documents or on incident maps during exercises or actual responses. A chapter tab/marker like the ones used in the *Field Guide for Oil Spill Response in Arctic Waters*, would also be useful to quickly locate a chapter or section in the manual. However, we suggest that these markers be an abbreviation of the category (such as MW for Moving-water) rather than a chapter number.

### *Basis*

Based on our examination of the documents in Table 1, we believe that the *Alaska Clean Seas Technical Manual – Volume 1 Tactical Descriptions*, the *Geographic Response Strategy – Part Two General Protection/Recovery Tactics* and the *Field Guide for Oil Spill Response in Arctic Waters* provide the best models for developing the ASRTM.

The ACS Technical Manual is generally acknowledged as a very good tactics manual. However, it contains much information that is specific to ACS, such as equipment brands and facilities. This information will have to be modified to become more general for statewide use. As noted in Table 1, many of the other reference documents provide valuable information that should be incorporated into the final manual.

Since there are no copyright issues associated with the ACS Technical Manual or the GRS document, we suggest that the useful information contained in these documents be combined to form the core of the ASRTM. Information taken directly or in summary from the other references could then be added to make the manual applicable for the entire state. This approach would save considerable costs over “starting from scratch” on an entirely new manual.

### *Format*

Examples A, B1, B2 and C depict possible document formats and layouts for producing the ASRTM.

Example A represents a small field guide (4.25 by 7 inches) similar to the *Field Operations Guide* (FOG) manuals produced as an Incident Command System (ICS) job aid. The document is designed to be spiral bound on the short top side to present a portrait view of each page. The advantage to this format is that the document may fit into a pocket or field pack. The disadvantage is that the page size is small, necessitating undersized text and figures.

Example B1 and B2 represents a medium format field guide (5.5 by 8 inches) similar to the *Field Guide for Oil Spill Response in Arctic Waters*. B1 is designed to be spiral bound along the top to present a landscape view. B2 is designed to be spiral bound on the left side to present a portrait view. This medium format is also small enough to make it easy to carry, but has more room on each page for larger figures and text. This is the format that we recommend for the ASRTM.

Figure C uses a standard 8.5 by 11 inch page three-hole punched for a three-ring binder. This format allows users to easily print their own copies from a CDROM or the Internet and then assemble the pages into a hardcopy manual. This approach also allows individual pages to be substituted if tactics are modified. Also new tactics can be easily added. The disadvantage to this format is that it is harder to carry into the field.

We did not produce an example on 11 by 17 inch tabloid paper because we do not feel that this size would work well for a field manual.

We suggest that the body of the ASRTM be developed as a grayscale document instead of color. This will reduce the printing costs and color is not necessary to depict the tactics contained in the referenced documents. The front cover could contain color to make the manual easily recognizable.

## **Issues for Further Consideration**

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In conducting the research required to produce this report and to meet the project requirements for Tasks I and II, Nuka Research identified a number of issues and questions that bear further consideration by the ADEC Project Man-

ager and staff in order to further clarify the scope and focus of the ASRTM. These issues are summarized below.

### *Scope*

The scope of the manual needs to be defined. Should the following categories be included in the manual:

- Non-mechanical response (In-Situ Burning, Dispersants, Bioremediation);
- Wildlife response;
- Waste management and disposal;
- Spill tracking and aerial surveillance; and
- Heavy fuel products?

One approach may be to develop the manual in phases, beginning with the most broad-based tactics.

### *Equipment classification system*

Standard classification of oil spill response equipment is important in order to specify equivalent equipment within a tactical description. We know of two common classification systems that are used to type oil spill response equipment:

- World Oil Catalog system developed by Robert Schultz and
- Oil Spill Response Organization (OSRO) developed by the U.S. Coast Guard.

After considerable discussion, the Central Cook Inlet GRS Workgroup chose to use the World Oil Catalog system in their document. Subsequent GRS workgroups have continued to use this classification system.

### *Process for developing the manual*

The ASTRM should be developed with the participation of its eventual users. The manual could be developed by a workgroup, possibly consisting of ADEC, USCG, EPA and the Alaska spill cooperative managers. An alternative would be to develop the manual in-house and have it analyzed by peer reviewers.

### *On-line version*

ADEC should consider developing a companion on-line version of the ASTRM that can be used as a training tool and quick reference guide. An on-line version could be designed to be interactive allowing the user to design a strategy by selecting and modifying a standard tactic to fit a particular circumstance. There could be some cost efficiencies in developing the two versions at the same time.



# Appendices

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Appendix A – Table (1) Summary of Documents Reviewed for Task 1

Appendix B – Table (2) List of Tactics in Documents of Table 1

Appendix C – ASRTM Example Formats

Example A

Example B1

Example B2

Example C