



ALASKA MARITIME  
PREVENTION & RESPONSE  
**NETWORK**

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**ALTERNATIVE PLANNING CRITERIA  
FOR TANK VESSELS CARRYING GROUPS II – V  
(PERSISTENT) OIL AS CARGO  
OPERATING IN WESTERN ALASKA  
(WAK-APC-TV(P)-2019)**

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**JULY 2019**

Prepared by:  
Alaska Maritime Prevention & Response Network  
1400 West Benson Boulevard, Suite 420  
Anchorage, Alaska 99503

## INTRODUCTION

This document outlines the Alaska Maritime Prevention & Response Network's (AMPRN) oil spill response Alternative Planning Criteria (APC) program for tank vessels carrying Groups II – V (persistent) oil as cargo (TV(P)) operating in the Western Alaska Captain of the Port (COTP) Zone as defined in 33 CFR § 3.85-15 (hereafter referred to as the Zone) to fulfill 33 CFR §§155.1040(j) and 1045(i) [Geographic-specific appendix (GSA)]. The Zone encompasses U.S. waters in the North Pacific Ocean, Bering Sea, Chukchi Sea, and Beaufort Sea, excluding the waters of Cook Inlet and their approaches where existing oil spill removal capabilities meet the Coast Guard regulatory requirements as depicted in Figure 1.

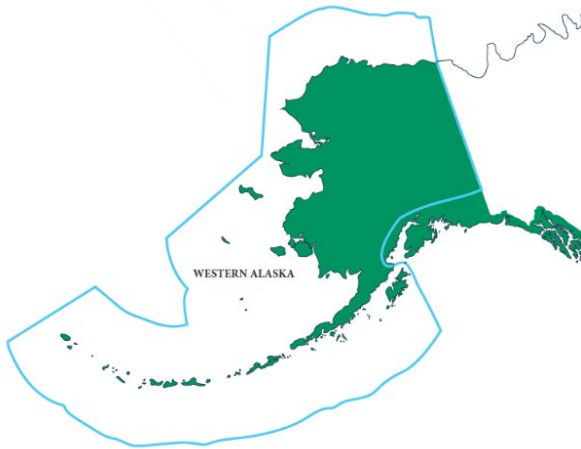


Figure 1: Western Alaska & Prince William Sound COTP Zones

Due to the size of the Western Alaska COTP Zone, lack of infrastructure, and prevailing harsh environmental conditions, portions of the national planning criteria (NPC) outlined in 33 CFR 155 Subpart D within the Zone are “inappropriate.” Per 33 CFR §155.1065(f), AMPRN is requesting its TV(P) APC be accepted for the response time and equipment gaps for response resources prescribed in 33 CFR §155.1050(a), (e), (f), (g) and 33 CFR Part 155 Appendix B for vessels participating in AMPRN TV(P) APC that are operating in the

Zone.

AMPRN's original tank vessel APC for all tank vessels carrying Groups I – V as cargo was accepted by the U.S. Coast Guard on May 15, 2012 for the Western Alaska COTP Zone. The approval of this APC was valid until December 31, 2015. Several extensions followed:

- September 01, 2015 through December 31, 2017.
- September 15, 2017 through June 30, 2018.
- June 22, 2018 through December 31, 2018
- November 20, 2018 through March 31, 2019.

On March 15, 2019, the U.S. Coast Guard extended AMPRN's TV APC for vessel carrying Groups II – V oil as cargo through September 30, 2019.<sup>1</sup>

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<sup>1</sup> U.S. Coast Guard accepted AMPRN's APC for tank vessels carrying Group I (non-persistent) oil as cargo on December 14, 2018 to take effect on April 1, 2019 and remain valid until July 1, 2021.

## DOCUMENTS AFFECTED

This document supersedes and replaces the Alaska Maritime Prevention & Response Network’s “*Western Alaska Alternative Planning Criteria (WAK-APC-T) Resubmission November 2012*” Amended February 2013 and April 2013.

## RECORD OF CHANGES

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## CONDITIONS OF ACCEPTANCE

The following items are addressed to facilitate timely U.S. Coast Guard review per *MER Policy Letter 01-17: Alternative Planning Criteria National Guidelines for Vessel Response Plans* dated October 12, 2017

1. Vessel Details. Appendix A
2. Geographic Areas. This document and Appendix A
3. Alternatives. Appendices C, D, E, F, G, H, & I
4. Identification of Required Response Resources. Appendices A & D
5. Build-Out Plan. Appendix L
6. Economic Assessment. This document
7. Environmental Assessment. This document
8. Equipment Inspections. This document and Appendix J
9. Personnel Training. This document and Appendix J
10. Exercises. This document and Appendix J
11. Period of Acceptance. Cover Letter

## OVERVIEW

The national planning criteria (NPC) for response time and some equipment elements outlined in 33 CFR 155 Subpart D within the Zone are “inappropriate” for vessels carrying persistent oil as cargo. Per 33 CFR §155.1065(f), AMPRN is requesting acceptance of its APC in response to the following gaps in vessel response plan (VRP) requirements for tank vessels carrying Groups II – V oils:

- Response time – response resources will be unable to reach every point along each vessel’s intended route within the Worst Case Discharge (WCD) and Maximum Most Probable Discharge (MMPD) timeframes set out in 33 CFR §§155.1050 (e) and (g).
- Equipment – AMPRN’s supporting OSRO does not have all the specific response resources for all operating environments along the areas the tank vessels intend to operate as prescribed in 33 CFR §155.1050 and Appendix B to 33 CFR Part 155 because: 1) there is a lack of infrastructure to support response resources, and 2) it is not economically feasible to develop necessary infrastructure or acquire and sustain resources in the vast and remote reaches of Western Alaska.

While AMPRN’s supporting Oil Spill Removal Organization (OSRO) – Alaska Chadux Corporation [Chadux] – has significant oil spill response capabilities, they do not meet all the prescribed regulatory response capabilities per 33 CF 155 Subpart D. The greatest gap being meeting the response time elements of the Subpart D regulations. Temporary storage is the next biggest gap, followed by EDRC. The boom size gap is minuscule. Appendix A provides details on the planning standards and associated gaps.

Understanding these gaps, AMPRN has designed an APC that combines prevention and response capabilities to mitigate the gaps as best as possible within the formidable challenges of distance, lack of infrastructure, and the harsh operating conditions.

The planning standards for many of the tanks vessels transiting the Zone exceed the planning caps per 33 CFR §155.1050(p). Appendix A illustrates the planning standards compared to the planning caps. Nonetheless, AMPRN’s supporting OSRO has developed agreements with other oil spill response organizations to cascade in resources as deemed necessary on an as available basis to assist in recovery and restoration efforts for incidents exceeding the planning caps, above and beyond the regulations.

## AMPRN AT A GLANCE

In 2011, AMPRN, a maritime non-profit 501(c)(6) corporation, was established to manage a tank vessel APC program for Western Alaska. Its Board of Directors is comprised of active maritime industry executives seeking a cost-effective, sustainable, and fully capable solution to their compliance requirements found in 33 CFR 155 Subpart D in balance with their social responsibility to protect the environment.

AMPRN’s main office is located in Anchorage, Alaska. This allows AMPRN to work closely with U.S. Coast Guard Captain of the Port (COTP) Western Alaska, State of Alaska Department of

Environmental Conservation, other federal, state, local and tribal agencies, non-government organizations, and our supporting OSRO.

“**Prevention Focused – Response Ready**” is AMPRN’s ethos. Driving down risk of an oil pollution incident, and thus preventing it, is understandably on par with response capabilities in the eyes of responsible TV(P) VRP plan holders. This is particularly true in remote areas where NPC requirements are inappropriate and unattainable due to lack of infrastructure and population centers, and the immense size of the Zone with the large distances involved, and the harsh operating environment of Western Alaska.

Accordingly, AMPRN’s TV(P) APC program reflects the concepts and consensus of the Aleutian Islands Risk Assessment regarding an optimal prevention and response system suited for vessels operating in the Zone.

“... the Advisory Panel and Management Team applied two key principles to their consideration of a wide-range of potential risk reduction options on the table at the time: (1) prevention takes priority over response, and (2) all measures should be realistic and practical (Wolniakowski et al 2011).”<sup>2</sup>

To learn more about AMPRN, please visit our website at: [www.AlaskaSeas.org](http://www.AlaskaSeas.org).

## APC STANDARD OF REVIEW: REGULATORY & POLICY

The tank vessel response plan requirements found in 33 CFR 155 Subpart D anticipated there would be areas in the country where strict compliance with the requirements of the regulation was simply “inappropriate.” The tank vessel regulations per 33 CFR §155.1065 do not set forth specific criteria to be considered by the U.S. Coast Guard when a tank vessel APC program is submitted like those prescribed in 33 CFR §155.5067 (nontank vessel APC). Nevertheless, we chose to use the criteria in 33 CFR §155.5067 and CG-MER Policy Letter 01-17<sup>3</sup> in articulating the justification and proposed alternatives for AMPRN’s APC TV(P).

### REASON(S) AND SUPPORTING INFORMATION FOR THE ALTERNATIVE PLANNING CRITERIA

Compliance with NPC (as it is outlined in federal regulation) is “inappropriate” in many regions within the Zone. Most of the Zone is either remote, inaccessible, or both. Except for tank vessels that operate in Cook Inlet and Prince William Sound, tank vessel traffic in the waters around Alaska occurs in remote areas with minimal infrastructure and limited ability to support local response resources to meet National Planning Criteria (NPC) standards. Essentially, given the tiered response planning requirements, it is impossible to base enough response resources along the 1,000 nautical mile primary vessel routes along the Great Circle Route in the vicinity of the Aleutian Islands because there are few locations that could support them. For this reason, NPC is inappropriate for much of the Western Alaska COTP zone. Consequently, AMPRN, as an APC

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<sup>2</sup> Nuka Research and Planning Group, LLC. Aleutian Islands Risk Assessment. *Recommending an Optimal Response System for the Aleutian Islands, Summary Report*. February 2015.

[http://aleutiansriskassessment.com/images/150313\\_AIRA\\_SummaryReport\\_vFINAL\\_lr.pdf](http://aleutiansriskassessment.com/images/150313_AIRA_SummaryReport_vFINAL_lr.pdf)

<sup>3</sup> CG-MER Policy Letter 01-17: Alternative Planning Criteria National Guidelines for Vessel Response Plans dated October 12, 2017.

Administrator, has requested renewal of an existing APC compliance program for tank vessels that focuses on, (1) reducing the risk of pollution incidents through vessel routing, threat monitoring, and early notification to mobilize resources prior to the incident to eliminate the threat of an oil spill or mitigate its consequences, and (2) employing a combination of standard and nonstandard response resources based on Chadux’s 26 years of experience responding to incidents in Western Alaska.

Figure 2 shows the size of Alaska compared to the Continental U.S. For TV(P)s to fully comply with the national planning criteria in 33 CFR 155 Subpart D in the Zone, procuring and staging required oil spill removal equipment in Western Alaska would exceed what is required and available for the entire West Coast of the U. S and much of the coast along the Gulf of Mexico. This area is sparsely populated and underdeveloped with little (if any) infrastructure; it is impractical and cost prohibitive to provide NPC coverage in much of the region. Without APC, it would be impossible for vessel operators to meet the federal vessel response plan requirements in many regions within the Zone, which would impede trade to the U.S.



Figure 2: Alaska compared to the Continental U.S

## **IDENTIFICATION OF REGULATIONS NECESSITATING THE ALTERNATIVE PLANNING CRITERIA REQUEST**

TV(P) APC is based on an inability to meet the response time outlined in CFR §155.1050(a), (e), (f), and (g), and elements of the response capabilities for oil recovery capacity and temporary storage per Appendix B to 33 CFR Part 155.

- It is not practical or economically feasible to maintain response capabilities capable of commencing spill recovery operations within 24 hours across of the entire Zone.
- Some of the recovery capabilities and capacity of AMPRN’s supporting OSRO do not fully meet boom and recovery system requirements within all operating environments the tank vessels intend to operate due to lack of supporting infrastructure.

## **PROPOSALS FOR ALTERNATIVE PROCEDURES, METHODS, OR EQUIPMENT STANDARDS, INCLUDING PREVENTION AND MITIGATION STRATEGIES THAT ENSURE LOW RISK OF SPILLS AND ADEQUATE RESPONSE MEASURES AS A RESULT OF THE ALTERNATIVE**

AMPRN’s balanced approach of developing “*alternatives*,” consisting of risk mitigation measures and response capabilities, is paramount in maintaining a practical, reasonable, and sustainable alternative compliance system suitable for Western Alaska. AMPRN’s program is built on the premise that risk mitigation and response capabilities are approached holistically within the intent of the Oil Pollution Act of 1990 (OPA-90).

## Bowtie Risk Analysis Model

In developing the *alternatives* for AMPRN’s TV(P) APC program, we conducted an analysis on a major hazard – in our case a major oil spill incident. We used the Bowtie Risk Analysis Model, which is a common model used in industry as depicted in Figure 3.

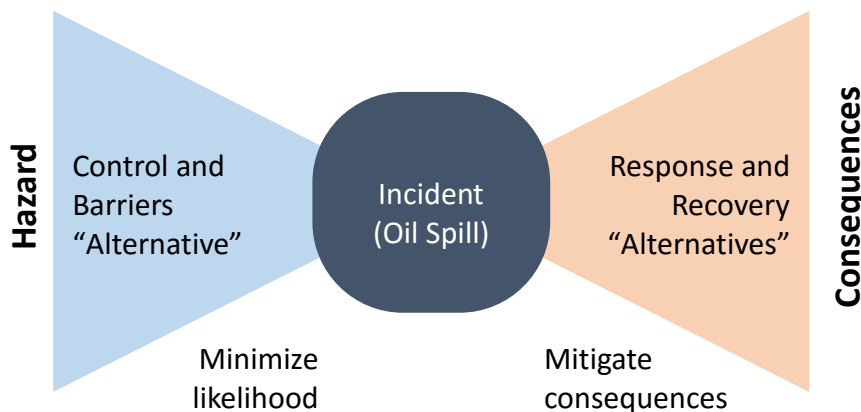


Figure 3: Bowtie Analysis

The purpose of this analysis was to define and analyze the potential events that could pose a threat to people, the environment, and an organization. Understanding these exposure areas allowed AMPRN to subsequently identify program gaps and develop ways and means to prevent or reduce the risk exposure or mitigate its consequences should the event occur. It starts with a major risk event, such as an oil spill. The left side addresses barriers to put in place to prevent the major event; the right-side outlines response capabilities to mitigate the damage should the event occur.

Using the Bowtie analysis model, we identified “*alternatives*” to help mitigate the likelihood of an oil spill incident from occurring, and protocols and capabilities to reduce the response time gap to mitigate the consequences of an oil spill should one occur. See Appendices B through M for the various alternatives and response resources available to support AMPRN’s TV(P) APC program.

## ENVIRONMENTAL AND ECONOMIC IMPACT ASSESSMENTS OF THE EFFECTS

### Risk Assessment

While there is always a chance for a tanker oil spill, the overall risk profile of an oil spill from a tank vessel carrying Groups II – V oil as cargo, while operating in and transiting through the Zone is, by all objective measures, minuscule. See Appendix N for details.

### Environmental Assessment

The pristine and productive waters of Western and Central Alaska are of critical national and regional importance to the U.S. and Alaska. As noted in the Bering Sea Vessel Traffic Risk Analysis:

“The Bering Sea is one of the most productive ecosystems in the world, including hundreds of species depending on Bering Sea habitat either seasonally or year-round (The National Academies, 1996). Subsistence uses of Bering Sea resources are critically important to thousands of people throughout the Bering Sea region. Marine species are particularly important to the human communities of the Bering Sea, including polar bears and other marine mammals, sea birds, fish, and shellfish. In 2014, five of the top 10 most valuable commercial fisheries in the U.S. were based in or near the Bering Sea. Any threat to fish or other animals and their habitat in the Bering Sea threatens both the food security of local communities and the significant fisheries that support U.S. and international markets.”<sup>4</sup>

Understanding this, AMPRN’s TV(P) APC is designed to confront the challenges of large distances and lack of infrastructure that characterize the Zone. As such, the primary environmental impact of this APC is the reduction of risk of oil spills caused by vessel groundings, coupled with in-region response resources configured for rapid mobilization within the Zone to mitigate the consequences of an oil spill.

## Economic Assessment

Figure 4 shows where 22 fully dedicated response hubs with vessels, personnel and other equipment would need to be established (in many cases where no infrastructure exists) to meet the NPC requirements associated with 33 CFR Part 155 Subpart D.

In Western Alaska, the cost of compliance with oil spill regulations currently is borne by the estimated 2,000 nontank vessels and tank vessels, with foreign-flag vessels comprising about 90 percent of the total number of vessels affected.<sup>5</sup> The *Aleutian Islands Risk Assessment* estimated the cost for full compliances along only the Aleutian Islands was \$30.5 – 36.9 million in capital costs plus \$37.7 to 41.8 million in annual operating costs. These cost estimates do not consider

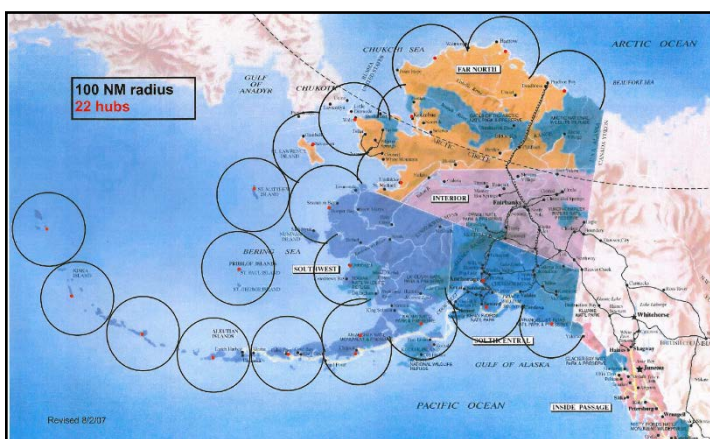


Figure 4: Western Alaska Response Hubs needed to meet NPC

the cost to build, operate, and maintain the infrastructure to support full compliance, such as housing, transportation facilities (air, water & land), power, water, sanitation, fuel storage, etc. If

<sup>4</sup> Nuka Research and Planning Group, LLC. *Bering Sea Vessel Traffic Risk Analysis*. December 2016.

<sup>5</sup> In 2014, 1,987 cargo and TV(P)s transited the Western Alaska and Prince William Sound Captain of the Port Zones on non-innocent passage and were invoiced by the sole APC provider during this year (Network). In 2015, 1,968 cargo and TV(P)s transited the Western Alaska and Prince William Sound Captain of the Port Zones on non-innocent passage and were invoiced by the two major APC providers. The average annual number of vessels paying into APC programs averaged 1,977 in years 2014 and 2015.

you include all the remote regions of Western Alaska in this total calculus (e.g., Kodiak, Alaska Peninsula, Aleutian Islands, Bering Sea, Northwest Arctic, North Slope), the aggregate life-cycle cost to the federal, state, local and tribal governments, and the private sector could be in the hundreds of millions (if not billions) of dollars to meet NPC.

Combine this with a limited number of vessels subject to these regulations that might pay for additional resources make it economically unfeasible to meet NPC response time requirements throughout the entire zone under current regulations. Simply stated – the public and private sectors do not have the resources to meet the pollution response infrastructure requirements within the entire Zone to meet and sustain NPC response time requirement.

## SUMMARY

AMPRN remains committed, as ably demonstrated over the past seven years, in reducing risk and enhancing environmental protection response capabilities through capital investments, strategic partnerships, and outreach with key stakeholders and government agencies.

The goals of AMPRN's TV(P) APC remain:

- 1) Protecting Alaska's pristine and vibrant marine ecosystem from oil spills;
- 2) Mitigating impacts to the marine environment, the marine transportation system, and the cultural, subsistence lifestyle of Alaska Natives due to an oil spill; and
- 3) Developing a practical, reasonable, and sustainable alternative compliance system that reduces risk of oil pollution incidents while continually building and enhancing response readiness.

With these goals in mind, AMPRN TV(P) APC remains unique in that it has consistently demonstrated through commitment and ingenuity, the technical, practical and real-world capability to reduce risk and enhance oil spill response readiness. As a leader in the APC industry, AMPRN is ensuring it complements an operator/owner's vessel safety management, environmental protection, and regulatory compliance programs, and will continue to do so for the foreseeable future.