Response Tiers & Best Available Technology

University of Alaska, Fairbanks
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Topics

- Alaska Clean Seas Overview
- ACS Membership and Agency Collaborations
- Tiered Response Strategy
- Best Available Technology (BAT) Overview
Area of Interest
Providing oil spill response services to the Alaska North Slope crude oil exploration efforts, producers, the first 167 miles of the Trans-Alaska Pipeline System and exploration areas of the OCS of Alaska.
ACS Co-Op Membership

- Alyeska Pipeline Service Company
- Anadarko Petroleum Corporation
- BP Exploration (Alaska) Inc.
- Brooks Range Petroleum Corporation
- ConocoPhillips Alaska Inc.
- Eni U.S. Operating Company Inc.
- ExxonMobil Production Company
- Great Bear
- Pioneer Natural Resources (USA)
- Savant Alaska
- Shell Exploration & Production Company
- Repsol
Government Collaboration

- North Slope Borough
- ADEC
- USCG
- NOAA
- BSSE
- EPA
- USF&WS
- BLM
- ADF&G
- DOD
Alaska Clean Seas Technical Manual

- Identifies Priority Sites, specifies Tactics and operational procedures
- Includes Best Available Technology Analysis (L-11)
- Updated annually
Alaska Clean Seas Technical Manual

- Tactics developed by joint industry/Federal/State Project Team
- Referred to in the North Slope Subarea Plan
- Applicable to all member companies
- Priority Protection Sites – Developed through the North Slope Sensitive Areas Working Group
- Available at [www.alaskacleanseas.org](http://www.alaskacleanseas.org)
- Manuals have been used by several OSRO’s and government agencies in development of similar response manuals
Personnel Response Tiers

ACS Employees and contractors

Local plus Regional Resources; North Slope Spill Response Team (NSSRT)

Auxiliary Contract Response Team (ACRT); Village Response Team (VRT); Mutual Aid Resources; Global Response Network
Tier 1 Responses

- Small, routine, short duration spill responses
- Often managed without an Incident Management Team (IMT)
- Typically no complicated operational, safety or environmental conditions
- Locally available personnel and equipment (ACS staff and contractors on field)
Tier 2 Responses

- Larger, long-duration, more complex spill responses
- Managed with an IMT in Unified Command with regulatory agencies
- Locally resources assisted by in-region assets and Mutual Aid support
- ACS personnel, Mutual Aid with NSSRT, other available in-region resources
Tier 3 Responses

- Large, long-duration, complex spill responses
- Managed with an IMT in Unified Command (Area Command, if necessary)
- Out-of-region support needed to meet resource requirements
- ACS, NSSRT, ACRT and VRT; out-of-region personnel and equipment; Global Response Network
Oil companies and Oil Spill Removal Organizations (OSROs) actively engage in developing BAT for prevention and response.

- BAT is required by Federal and State law to be part of contingency plans.
- Reevaluated at contingency plan reviews.
- Oil spill BAT and R&D must meet an identified operational need (newer is not always better).
- No “science for the sake of science” – New technologies should provide effective tools to support field operations.
Overall cleanup goals are to remove spilled oil from the environment using the safest, least invasive and least damaging methods.

Primary cleanup methods remain:
- Mechanical recovery (skimmers, pumps, etc.)
- In-situ burning
- Dispersant application
- Natural recovery
Best Available Technology

- Global Response Network Operational Teams
  - Offshore Recovery
  - Nearshore/Shoreline Response
  - Remote Sensing
  - Dispersants
  - In-situ Burning
  - Response Management
  - Ice-Covered Waters

- Arctic Council Oil and Gas Assessment (OGA)
- American Petroleum Institute (API)
- Joint Industry Task Force (JITF) and Joint Industry Project (JIP)
Global Activities

- International Oil Spill Conference
- International Mechanical Recovery In Ice Workshop
- APICOM
  - Association of Petroleum Industry Cooperative Managers
- AMOP (Government of Canada)
  - Arctic and Marine Oil Spill Program Technical Seminar on Environmental Contamination and Response
Best Available Technology

- BAT Pathway to Success:
  - Identify a true operational need and benefit
  - Test and evaluate
  - Determine whether an idea is commercially viable
  - Develop, train personnel and incorporate as tactic

- MUST be Arctic–deployable

- Many ideas originate in the field (“necessity is the mother of invention…”)

- Alaska Clean Seas, our member companies and regulatory community remain active in oil spill R&D and attend conferences to evaluate new products and techniques
Best Available Technology

- New technology comes in different forms
  - Built for purpose ("classic" product R&D)
  - Preexisting product modified and applied to new function
- Communication between the designer and the field user is paramount!
Current Uses of BAT

- Remote sensing for oil under ice
- Unmanned Aerial Vehicles (UAV) and Autonomous Underwater Vehicles (AUV)
- Oil Herders and Igniters
- Heated skimmers and hoses
Questions & Additional Information?

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