

Increased Preparedness in Prince William Sound since March 24th,1989

I. Contingency Planning.

A. Response Plans.

1989: The National Contingency Plan was the only Federal guidelines and did not address area specific concerns. The State had a plan which was created in 1983 called the Alaska Oil & Hazardous Substance Release Contingency Plan, also known as the State Master Plan. Alyeska 's current plan was dated 1987 and had a worst case discharge of 4,000 barrels.

1999:

- Unified Plan (AK/EPA/USCG ownership) 10 subarea plans, and one addendum Copper River Delta & Flats which will eventually be incorporated into the PWS sub area plan. All plans are subject to public review to ensure all affected /covered communities have an opportunity to address their concerns. Local knowledge gets incorporated into the plans making them very effective.
- TAPS vessels have Tanker response plans that are approved by G-MOR and refined oil carrying barges are under alternative compliance in AK due to geographical and financial limitations making it impossible to be in full compliance with OPA90. (Alternative compliance gives the carrier a waiver from meeting all the response requirements of OPA90. Because of the regions they operate in it is not feasible for them to have an Oil Spill Response Organization (OSRO) on scene in the short period of time stipulated by OPA90. To balance this out, these carriers do carry a larger supply of spill response equipment on board their barges. They also conduct drills and exercises as mandated by OPA90.)

B. RRT Organization. The National Response Team (NRT) with their Regional Response Teams (RRT's) started in 1968. Until the mid 80's Alaska was included in the Seattle region.

1989: Membership in '89 same as in '99. At the time, as it is today, Alaska Department of Fish & Game (ADFG) was represented on the ARRT by Alaska Department of Environmental Conservation (ADEC)

1999: ADEC is the only AK State representative and is therefore the representative of ADFG. They still do not have an individual seat on the ARRT.

C. Unified Command.

1989: SOSOC and FOSC were at odds as to what the best method of cleanup would be. The FOSC was considering cost and limitations under Marine

Safety Manual. State wanted aggressive cleanup where particular resources were affected. State claimed right of concurrence, which would essentially have created what we today call a Unified command. At the time the FOSC rejected this, but did agree to consult with the State. The NCP offered virtually no guidance in how to resolve this issue or any other Federal-State conflicts that occurred during the spill.

1999: Unified Command with State and Responsible Party. Other interest groups have access to Unified Command through the Multi Agency Command (MAC). Incident Command System has been adopted by USCG, state, EPA, and industry.

D. Risk Communication.

1989: The press/public was not kept informed on the progress of the spill cleanup, and the information that was passed was not accurate. This resulted in a lack of public confidence. Affected communities did not feel anyone was listening to their concerns.

1999: Under ICS a Joint Information Center is formed immediately. Community liaisons are also utilized to get information to and from isolated communities. During recent SONS exercise, conducted a live videoconference that allowed direct interaction between the communities and the Unified Command.

E. Guidelines/Permits.

1. Dispersants:

1989: The RRT had just three weeks before the spill pre-approved some zones in PWS for dispersant usage. Alyeska had only 69 drums of Corexit 9527 in Valdez. The FOSC began discussing the possibility of using these dispersant within a few hours of the spill. There was a 16 hour delay until the first application was made which may have hindered its success. Over the next few days several test applications were conducted. When it became apparent that the dispersants were working, a severe storm prevented any further applications. After the storm, the oil was too emulsified to be susceptible to dispersants. C130 and ADSS pack was maintained by Exxon out of Arizona and was used for some of the test applications.

1999: Much more information on the effectiveness of dispersants is available which will speed up the approval process by eliminating the need for multiple test applications. The pre-approved zones for dispersant applications are currently under review by the RRT and could result in more pre-approved zones. The application equipment and dispersant are available immediately staged out of Anchorage, and the entire process from permit application to the actual spraying is exercised regularly. Today C130 Lynden with 2 ADSS pack (Alyeska owned) and 60,000 gallons Corexit 9527 maintained in warm chem storage in Anchorage. Locally in Valdez, 3 frankale vessel application systems, 2 helibuckets, and

additional quantities of 9527 are stored in Valdez. New Escort Response Vessels (ERVs) are being built with integral dispersant systems on board.

2. In-Situ Burning:

1989: Guidelines did not exist for open water burning. Guidelines for burning oil in pack ice and on land spills were developed for the North Slope in 1983. The test burns conducted in PWS in '89 utilized the North Slope guidance and modified it for open water burns. One test burn was conducted and was successful. In Situ burn equipment was ordered in but was never used again due to the weather. The oil had emulsified to the point where it was 80% water and could not sustain a burn. Again, the small time window of opportunity where this tool can be used was missed. In addition, had the weather not hindered the use of in-situ burning, there was still not enough fire boom or towing vessels available to make effective use of this technology nor could they be ordered on scene quickly enough to make burning a viable option.

1999: We are developing plans and processes that will enable burn decisions to be made within the narrow the window of opportunity where this technology will still be effective. SERVS also has on hand the largest inventory of fire boom in the world and maintains a contract with 300 fishing vessels some of who will serve as towing vessels for fire boom. The new burn guidelines don't have approval of DOI but have been issued as agency guidelines under the State. RRT is still endorsing the guidelines.

3. Bioremediation:

1989: Largest application of bioremedial agents ever applied. Approximately 110 miles of shoreline were treated. Application continued until 1992 with the results debatable due to inaccurate scientific measurements.

1999: Still a viable long-term remediation tool. Overall worked very well. Potential problems were exposure of workers to the chemical (fertilizer to aid natural organisms)

F. How Clean is Clean?

1989:

- If it's not sheening it's clean (prior to Exxon Valdez Oil Spill), during spill State wanted 100% clean, FOSC was less strict but NCP did not address issue.
- Shoreline was signed off as clean if oil no longer moving, gross contamination removed, and threat to wildlife was removed.

1992:

- Discontinued shoreline cleanup after determined additional cleanup would cause more harm than good. Beaches now contaminated under the surface were left alone because active biota on the surface would have been killed.
- Decision-makers were USCG, NOAA, ADEC, biologist, geomorphologist, and landowner.

1999: Net environmental benefit is the guiding principle.

G. Exercise Requirements.

1989: National Contingency Plan; occasional exercises based on contingency plan. Not a joint effort as it is under PREP. Unified command concept never exercised. Drills every few years outside the Port of Valdez. Individuals were not assigned response roles as we have now.

1999:

- PREP guidelines, although a voluntary program enables all plan holders to accomplish required spill response training. PREP is a Unified federal effort that satisfies the training requirements for oil spill response. PREP represents the minimum guidelines for ensuring an adequate response to a spill. The PREP guidelines became effective January 1, 1994.
- In PWS, PREP exercises are conducted several times a year. Not all exercises are large, nor do they need to be. There is at least one large exercise annually, most notably the recent SONS exercise, where the TAPS shippers take turns in sponsoring the exercises.

II. Navigation Systems.

A. Vessel Traffic Service.

The Disabled Tanker Towing and Prince William Sound Risk Assessment were completed in 1994 and 1996 respectfully. Data from these two documents continues to support and provide opportunities for the positive changes made within the last decade that have substantially reduced risk. In addition, in the fall of 1994, the VTS in Prince William Sound researched the effects of Circadian rhythms on watchstander performance. Following that study in 1995, it was determined that shifting to a week on week off 12 hour watch schedule provided for less disruptions in sleep patterns thus increasing watchstander alertness and reducing consumption of stimulants. As a result, watchstander performance has increased

1989: Radars with non-processed data. Vessels manually plotted to the limit of the screen. Only 400 SQ NM monitored. Only two people on watch.

1999: Radars improved, and integrated within Electronic Display Chart. In 1994 VTS PWS was the first VTS to receive this system which has Automated Information System (AIS) receive capability. AIS allows our watch surveillance area to increase ten fold, to over 5000 SQ NM. All Tankers carry AIS per Federal Regulations. The AIS System uses a Digital Selective Calling (DSC), an automated VHF Calling system interfaced with Digital Global Positioning System (DGPS) and allows vessel monitoring outside of radar range. The VTS now maintains a three-person watch 24 hours a day. Training procedures have also been improved.

B. Escort Tugs.

1989: 3 Crowley tugs which were primarily used as docking tugs. When they escorted the tankers only one tug escorted and only through the narrows to Potato Pt. The contingency plan listed: 3 docking tugs, 5 work boats, 2 mooring launches, 1 contingency barge which contained one Vikoma boom reel. Could use it as temporary storage if nothing else was available.

1999:

- 10 Specialty tugs/Emergency Response Vessels (ERV) in the fleet including the NANUQ (new 10,000 hp tractor tug). The sistership Tan'erliq is scheduled to arrive in April, and 3 Pollution Response Tugs (PRT's) are being built to replace the current ERV's. With receipt of the Tractor Tugs, new tethering procedures (indirect mode) have been used further increasing effectiveness while tethering through the Valdez Narrows.
- Tankers are now escorted all the way to Hinchinbrook entrance. The Current Escort System for Laden Tankers consists of one tethered escort and one additional escort (minimum) through the Valdez Narrows to the Pilot Station. The tether is dropped in the vicinity of buoy #9. After the Vessel enters the Valdez Arm one of the escort vessels turns back and the second vessel further escorts the vessel from Naked Island and finally Port Etches. The Gulf Service usually serves as the Port Etches Tug. Both the Gulf Service and the original escort stand by at Hinchinbrook Entrance until the vessel is 17 nm to sea in the Gulf of Alaska. For Inbound Unladen Tankers, these sentinel escorts provide additional response capability estimated to be a 18% increase for vessels in ballast.

C. Pilotage Requirements.

1989: A State Pilot is embarked/disembarked to/from the Tanker at Rocky Point.

1999: A State Pilot continues to ride the Tanker and embarks/disembarks at Bligh Reef thus continuing the transit another 9 NM.

D. Communication Systems.

1989: Radio communications for spill response from scene to command center only.

1999: Fixed radio repeater system with communications capability to cover PWS.

E. Aids to Navigation (AtoN).

1989: Bligh Reef Buoy # 6 was sole aid at Bligh Reef.

1999: Bligh Reef light established. D-17 Plans to establish RACON on light structure during spring 1999. Buoy also on scene, however after establishment of the racon, there are plans to remove the buoy since it is a redundant floating aid.

F. Ice Procedures.

1989: No Standard Operating Procedures in place.

1999: Ice Reporting procedures also exist within the Vessel Escort Response Plan (VERP). Industry vessels report ice concentrations to the VTS and if no report is received for 6 hours an ice scout vessel is dispatched.

G. Heavy Weather Procedures.

1989: No VERP in place describing Standard Operating Procedures.

1999: VERP in place and serves as a living document. Within this Operational Document, sea and wind state criteria are in place to reduce system risk. These factors require industry to add additional escorts, or when certain criteria are reached, tanker transits are prohibited through the Valdez Narrows and outbound through Hinchinbrook Entrance.

III. Response Equipment.

A. Response Vessels.

1989: No dedicated response vessels.

1999: State of the art, 11 vessel escort/response system with an additional open ocean rescue tug at Hinchinbrook entrance.

B. Response Barges.

1989: One deck barge w/ 4,000 gallons storage capacity

1999: 7 barges with 818,000 barrels (34,356,000 gallons) storage capacity for recovered oil.

C. Temporary Storage Capacity On-scene.

1989: 4,000 bbls in one deck barge

1999: 800,000+ bbls

D. Fishing Vessels.

1989: None

1999: 300 +, includes 50 in core fleet. These vessels would be called up by SERVVS to function as boom towing vessels, tender vessels, etc. To have a contract with SERVVS, SERVVS requires the vessel to have a Coast Guard Fishing Vessel exam. This has added benefit as these vessels are now better maintained and more seaworthy. They are also better prepared in the event of an emergency. The 50

vessels which comprise the core fleet receive training from SERVS on an annual basis. They also participate in regularly scheduled spill response equipment deployment exercises.

E. Boom.

1989:

- 21,000 feet containment boom,
- 5 Vicoma sea paks,
- No fire boom until was received from co-ops and then used in the test burn.

1999:

- 35 miles of containment boom
- 3,600 feet of fire boom; 1,000 feet of American Marine Ocean Class fire boom + 2,600 feet of 3M fire boom

F. Skimmers.

1989: 13 skimming systems with 27,000 bbls of oil recovery capability in 72 hours.

1999: 60+ skimming systems w/ recovery capability of 300,000 bbls in 72 hours.

G. Assessment Capabilities. Basically the same technology in 1989 as in 1999.

H. Contingency Funding.

- Cost of cleanup exceeded \$2.1 billion, out of that, \$100M was incurred by the Federal response. Today we still don't have enough money in the Federal Budget to pay for the clean up of another Exxon Valdez should the responsible party walk away.
- The vessel owners/operators must have a Certificate of Financial Responsibility (COFR) when operating in the U. S. exclusive economic zone. The COFRs are designed to meet the financial responsibility to cover their liability for the clean up in the event of a spill. A COFR however, does not cover the cost of the entire operation if it is on the scale of the Exxon Valdez. The value of the COFR they must maintain is determined using various formulas based on the vessel's registry and size.

1989: Alyeska \$1M (prevention)

State: \$1M

Federal: \$6.7M

1999: Alyeska \$60M (prevention)

State: \$50M

Federal: \$1B

I. Trained Personnel.

- 1989:** USCG Strike Teams, volunteers, few contractors, and Alaska Clean Seas as an OSRO on the North Slope. Although not an OSRO for PWS, did participate in a CoOp arrangement for mutual aid of equipment and technology.
- 1999:** USCG personnel remain the same, however the industry has greatly increased their resource base. In addition, Oil Spill Response Organizations (OSRO) have formed all over the nation. SERVS in PWS is the largest OSRO and is operated by the TAPS owners. In the event of a large spill, SERVS and other personnel from OSROs from around the country would be available for the response.

J. Waste Management and Disposal on Shore.

- 1989:** No real plans, generic information without actual direction. Identifies all the obstacles without offering solutions. No preplanned procedures.
- 1999:** Vessel Response Plans, and PWS subarea plan contain extensive directives for waste management including detailed handling and disposal guidelines.