

The Observer

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AK Chamber of Commerce - AK Wilderness Recreation & Tourism Assoc. - Chugach Alaska Corp. - Cordova District Fishermen United - OSREC - PWS Aquaculture Corp.

Council concerned over tow line breaks

The citizens' council spent much of the past summer attempting to understand and correct problems that led to two broken tether lines on the rescue tugs that escort oil-laden tankers out of Prince William Sound. The effort has involved not only the council, but Alyeska Pipeline, the Alaska Department of Environmental Conservation, and other companies and organizations involved in keeping the Sound safe from oil spills.

The most recent break occurred during a June 23 practice exercise in calm weather. The first occurred in December 2003, during an exercise in more severe weather. Both involved the *Aware*, one of three Prevention/Response Tugs (or PRTs) in the Alyeska fleet operated by Crowley Marine Services.

The tether lines – high-strength hawsers 10 inches in circumference –

are crucial to Alyeska's capability to rescue a disabled tanker.

"In the worst case, a break like this during an actual rescue in heavy weather could lead to another disaster like the *Exxon Valdez*," said John Devens, executive director of the council. "It's clearly a matter that needs to be high on everyone's priority list."

In both cases, the breaks appear to have been precipitated by the line burying itself in wraps lower on the winch drum as it came under load during the exercises. Samson Rope Technologies, manufacturer of the parted lines, analyzed the broken line from the June 23 incident and concluded, "Rope compression, heat and excess chafing appear to be the major contributors to the line failure."

See page 3, **Breaks**

Spill drill exercises the handover of authority

By Tony Parkin
Project Manager

If there's ever another big oil spill in Prince William Sound, Alyeska Pipeline Service Co. is charged with running the first hours of the response. But at some point, the company responsible for the spill is supposed to take over.

Just how that would happen was tested in a large drill in Prince William Sound in early August.

The scenario had an escort tug colliding with an imaginary ConocoPhillips tanker, the *Polar Excelsior*, as it headed out of Valdez with a load of North Slope crude at 8 p.m. on Aug. 3. The result was a hole in one of the *Excelsior's* oil tanks and a 5,000 barrel spill in Valdez Arm, a few miles south-

west of the city of Valdez.

The drill started at 8 o'clock the next morning, meaning that for drill purposes the response had been going on for 12 hours when the drill participants took their work stations at Alyeska's Valdez Emergency Operations Center.

In addition, the drill included some on-water activities, with a response barge and task force being deployed in Jack Bay. There, a Geographic Response Strategy was exercised, though that was not a specific part of the drill scenario.

Overall the greatest value of this drill was the chance for ConocoPhillips to bring its spill-response team to Valdez

See page 3, **Drill**

New double-hull in town



Alaska Tanker Co.'s first new double-hull vessel, the *Alaskan Frontier*, arrived in Valdez on a foggy day in September and was greeted by an Alyeska escort tug (top). The 941-foot ship will haul North Slope crude for BP. It cost \$250 million, according to the company, and can carry up to 1.3 million barrels of oil. Besides the double hull, which reduces the risk and size of oil spills, the *Frontier* has double propellers, rudders, engine rooms, navigation systems, and communications systems. BP expects to have a total of four of the new vessels in service by 2006. Ralph Torjusen, above, is one of the captains who will command the *Frontier*. Photos by Stan Jones, citizens' council.

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Volunteer Profile

'Snowbird' keeps hand in on science committee

Ask A.J. Paul how he wound up in Alaska, and he answers like a lot of the state's residents: The lure was the land itself.

"I had no plans and no job," Paul said. "I just wanted to see what Alaska was like. It sucked me in – the beautiful scenery, the constant daylight, the wildflowers."

That was in 1970, 34 years ago this summer. Paul, then 23, fetched up in Fairbanks with a freshly minted bachelor's degree in fisheries and marine biology from the University of Massachusetts. He started a master's degree program at the University of Alaska that fall, and, a year later, took a job with the university's Institute of Marine Science. The job became a career and he stayed with the institute until his retirement three years ago.

In 1975, he made the move that would lead to his role as member of the citizens' council's Scientific Advisory Committee. He took a job as resident scientist at the institute's Seward Marine Station, which provides shore support for research vessels.

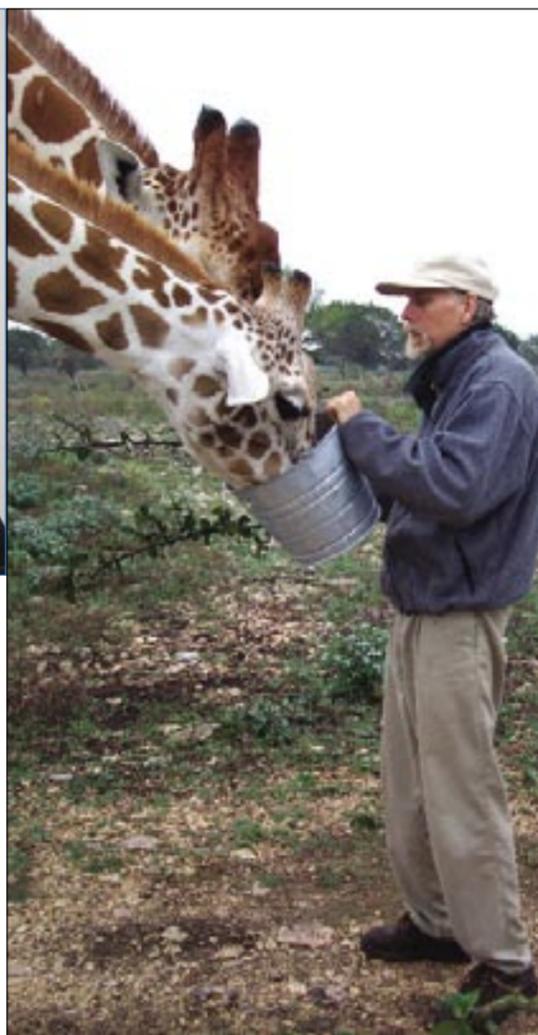
And Seward is where he stayed, though he later made some trips to Japan while working on his doctorate at Hokkaido University, a sister institution to the University of Alaska Fairbanks.

His involvement with the citizens' council started a few months after the *Exxon Valdez* oil spill of 1989. He got a call from Chris Gates, who was port director for the city of Seward and a board member of the citizens' council.



A.J. Paul, a member of the council's Scientific Advisory Committee, now spends his winters on the Y-O Ranch in Texas (right), where he helps out by – among other things – feeding the giraffes. Above, he sports a pocket protector, official fashion accessory of the somewhat nerdy committee on which he has served for more than a decade.

Photos by Stan Jones and Lisa Ka'aihue, citizens' council.



years pass without another big spill and memories fade.

"The biggest problem is to keep the motivation," Paul said. "The glory is gone now. We're not knights riding to battle. We've become a bureaucracy."

Nowadays, Paul spends his summers in Fairbanks and his winters on the Y-O Ranch near Kerrville, Texas. The Y-O is a 50,000-acre family owned ranch dating back to just after the Civil War. As is the case with many old-style ranches today, cattle-raising isn't profitable enough to support it.

So the family has sold off part of the spread as homesites, and stocked the rest with exotic animals for hunting. The owners also bring in revenue by selling animals to zoos, and by hosting kids' camps, cattle drives, weddings, corporate retreats and

Gates let Paul know the council was forming the Scientific Advisory Committee and suggested he take one of the seats.

"I was a logical choice," Paul said. "The university likes its faculty and staff to do public service, so it was a natural fit. I've been here ever since."

In Paul's view, the independent voice of the citizens' council is a useful tool for improving the environmental safety of crude oil transportation.

"The oil industry is a for-profit industry and a for-profit industry is always looking for ways to cut costs," Paul said. "They need oversight by

people not in their profit stream and I think that's never going to change."

He regards the council as a "microcosm of democracy" because of the diversity of views and backgrounds among the board of directors and the volunteers like himself who make up the council's four standing technical advisory committees.

"Things move slowly but I don't think that's a negative thing," he said. "Things are discussed and thought about."

One big risk, he believes, is that the complacency that allowed the *Exxon Valdez* to happen may set in again as the

family reunions.

Paul's home site covers 64 acres. His house includes all the modern conveniences, except for communications. He has no internet service and his only electronic link to the outside world is a 12-volt "bag phone," which works by radio and, as the name suggests, is carried around in a bag.

As a result, Paul can't be very active on the Scientific Advisory Committee in the winter, though he does still participate during his summers in Fairbanks.

"I'll stay on as long as I'm needed," Paul said, "but I'm not the best. I'm a snowbird, now."

Council visits Homer to warn about alien invaders

Homer's Alaska Islands and Ocean Visitor Center was the site of a citizens' council presentation on non-indigenous species on August 19.

Non-indigenous species are becoming an increasing concern around the world as plants, animals, and microbes are transported – sometimes intentionally, sometimes by accident – from their native environments to new ones where they can threaten local species.

Examples include the northern pike, which has invaded lakes in Southcentral Alaska, and the Chinese mitten crab and the European green crab, which have invaded West Coast ports.

The council's chief concern is with non-indigenous species transported in

the ballast water of incoming tankers, and released into Port Valdez. Research has shown they are reaching Valdez, but so far none is known to have established itself and begun reproducing.

The chief concern is non-indigenous species transported in ballast water

Speakers at the forum included council Project Manager Lisa Ka'aihue, Deputy Director Marilyn Leland, and representatives from the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, and the University of Alaska campus in Homer.

For more information, check the council web site, www.pwsrca.org/nis. For a presentation on the issue in your community, contact Community Liaison Linda Robinson at robinson@pwsrca.org.

Council's web wizard logs off

Tracy Leithauser, manager of the council's award-winning Internet site, resigned in late August to go to work at the Health Sciences Information Service at the University of Alaska Anchorage Consortium Library.

Leithauser, who started with the council in December 2002, was responsible for a major expansion of www.pwsrca.org, the official web site of the citizens' council. In 2003, her work won an Award of Excellence from the Alaska Chapter of the Public Relations Society of America.

At the university, she will work as assistant to the HSIS medical librarians.

"I am appreciative of the opportunity to have worked with an organiza-



Tracy Leithauser waves goodbye to the citizens' council. Photo by Stan Jones.

tion where public information plays such an important role," Leithauser said. "It's been exciting and challenging."

THE OBSERVER is published by the Prince William Sound Regional Citizens' Advisory Council. Except as noted otherwise, articles are written by Stan Jones, the council's Public Information Manager. For a free subscription, contact either of the council offices listed on the back page.

When oil stops flowing, who pays for cleanup?

One day, the North Slope oilfields will run dry and it will be time to remove the pipeline and terminal facilities built to transport crude oil south, and time to clean up the 800-mile corridor to Valdez.

The question is, will the money be there to pay for the work?

It's supposed to be. A comprehensive 1985 tariff agreement between the state and the oil industry allowed the owners of the trans-Alaska pipeline and the Valdez tanker terminal to collect a special fee on every barrel of oil moving through the system. This fee was intended to offset the future cost of what's called DR&R, meaning dismantlement and removal of the facilities, and restoration of the land they stood on.

The problem is, these fees have not been accumulated in a dedicated fund, nor clearly and publicly accounted for. While it's known how much has been collected, it's not known where the money is now, or how certain we can be that it will be available when

needed.

To make sure it is, our council has urged the Regulatory Commission of Alaska to require the system's oil-company owners to establish a dedicated DR&R fund with transparent accounting of its management. Government agencies, public-interest organizations such as ours, and individual Alaskans must be able to satisfy themselves the money is being handled properly.

Alyeska Pipeline Service Co. operates the system for several owner companies, most of whom are subsidiaries of major North Slope oil producers. According to Alyeska, the owners are BP Pipelines (Alaska) Inc.; ConocoPhillips Transportation Alaska, Inc.; ExxonMobil Pipeline Company; Unocal Pipeline Company; and Koch Alaska Pipeline Company.



John Devens

For the most part, the North Slope producers are their own customers, shipping their own oil through their own pipeline and paying themselves the tariffs, including DR&R fees. However, some non-owners of the pipeline also produce North Slope oil and pay tariffs and DR&R fees to the owner companies.

Our recommendations came in response to a call for comments earlier this year by the state regulatory commission, which oversees the tariffs public utilities charge their customers. The commission's interest in DR&R arises from its authority over pipeline tariffs, including the DR&R fee collected since 1985.

Our comments were based on a report on DR&R issues by Fairbanks economist Richard Fineberg. Accord-

ing to Fineberg, pipeline owners have already collected more than \$1.5 billion in DR&R funds.

Besides advocating a dedicated fund with transparent accounting, we also urged the agency to ensure the regulations do not give pipeline owners an incentive to delay DR&R projects so they can continue earning investment income off the DR&R funds. If the pipeline stays in operation until 2034, Fineberg estimated, the value of DR&R collections plus income on the collected funds could exceed actual DR&R expenses by more than \$50 billion.

We believe all Alaskans would agree the pipeline corridor should be restored to natural conditions when oil production ends on the North Slope. State oversight of DR&R funds is an important step in making sure that happens.

• John Devens is executive director of the citizens' council.

BREAKS: Search is on for the problem's causes, cures

Continued from page 1

Because of the dual failures, the state Department of Environmental Conservation has banned the PRTs from serving as primary escorts for loaded tankers. Each tanker traveling through Prince William Sound is escorted by two escort tugs. One – the primary tug – is actually tethered to the tanker for part of the trip to enable immediate response in case of an emergency. Until the problem with the PRTs is resolved, only Alyeska's

Enhanced Tractor Tugs, the *Nanuq* and the *Tan'erliq*, are being allowed to serve as primary escorts. Neither of those vessels has experienced tether line problems during exercises.

The council and the other organizations working on the issue came to believe the fundamental issue was a failure to properly rewind the lines onto the winch, and Crowley issued a directive in January of this year, shortly after the December break, directing its captains to "ensure that the tether lines are spooled

tight on the winch drums."

Despite this directive, the second tether line break came in June, leading to the state's ban on use of the PRTs as primary escorts, and a July 23 letter of concern from the council about Crowley's handling of the lines.

"We are alarmed by what appears to be a pattern of incidents precipitated by inadequate or poorly understood Standard Operating Procedures (SOPs) and failure to adhere to SOPs by senior operations personnel," Devens wrote.

As the *Observer* went to press, the PRTs were still banned from service as primary escorts, though the state of Alaska was expected to lift the ban once SERVS and Crowley were able to demonstrate the line management problems on the tugs have been resolved.

Devens' letter invited representatives of Crowley and of the tanker companies to address the council on the steps being taken to resolve the problems, and they were scheduled to do so at the council's September board meeting in Kenai.

Devens' letter invited representatives of Crowley and of the tanker companies to address the council on the steps being taken to resolve the problems, and they were scheduled to do so at the council's September board meeting in Kenai.

DRILL: Transfer from Alyeska to ConocoPhillips is tested

Continued from page 1

to see some of Prince William Sound and appreciate its beauty as well as the unique logistical challenges to responding to an oil spill here. Over 100 ConocoPhillips personnel came to Valdez for the drill, with more participating at Crisis Management Centers in Anchorage and Houston, Texas.

Another benefit of the drill was the chance for ConocoPhillips and Alyeska to work together and practice the all-important handover. That took place on the second day of the drill and was, generally speaking, a success.

However, one aspect that the citizens' council wanted to see occur did not truly happen. That was the tricky process of transferring response management from Alyeska's computer software – a system called Response TM – to IAP, the system used by ConocoPhillips. An artificiality of the drill – meaning a place where it wasn't completely realistic – was that ConocoPhillips' IAP software was running from the start and so no true transition from one system to the other was ever attempted. It remains unclear to the council how a transition would take place in a real event.

Besides testing the transition from

Alyeska to ConocoPhillips, this drill exercised something new to oil spill planning in Prince William Sound: the Places of Refuge concept. This refers to the process of identifying in advance bays where a crippled tanker could be

participants opposed this choice because the matrix developed for selecting places of refuge indicated Port Valdez was a better location for the stricken tanker in this scenario. Council staff coordinated a meeting with other stakeholders and

being in the water for so many hours, this tactic was approved by the Unified Command. The council believes all aspects of a drill – including decisions about when and where to use chemical dispersants – should be as realistic as possible, reflecting the processes and outcomes likely to occur in response to a real spill.

Another problem for the drill, the council believes, is that some of Alyeska's key personnel didn't take advantage of Coast Guard training in response management that was offered shortly before the drill. As a result, the drill didn't go as smoothly as it could and should have. We hope Alyeska will make this a key lesson learned from this drill.

Nevertheless, the council thought the drill went well overall and was a very useful training exercise for those involved. Next year, ExxonMobil will conduct the big summer drill in Prince William Sound, and the council looks forward to working with that company, as well as with the Coast Guard, Alyeska, and the state Department of Environmental Conservation, to ensure that drill builds on what we learned this summer.



The Lady Samantha works near a response barge in Jack Bay during August's ConocoPhillips drill. Photo by Stan Jones, citizens' council.

towed and anchored for repairs and for removal of its remaining oil. The citizens' council has been participating in this process by helping evaluate various bays in Prince William Sound for this purpose.

Originally, the drill scenario called for the use of Jack Bay as a Place of Refuge. The council and other drill

presented the selection of Port Valdez to the Unified Command, and the destination of the tanker was changed.

Towards the end of the drill, with the shoreline being threatened by the spill, it was decided to conduct a tactical dispersant application. Despite computer modeling that showed the spilled oil to be non-dispersible after



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Summertime in Alaska

In June, the Observer asked the council's staff, board members, and committee volunteers to send us pictures of their summer activities. As you can imagine, a good many of them involved fish. Herewith, a sample!



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Clockwise from upper left: 1. Committee volunteer Karl Pulliam of Seldovia hoists a 20-plus-pound king salmon caught at a commercial setnet site in Port Graham. 2. Can you guess which firefighter in training is Project Manager Rhonda Arvidson of Valdez? (See end for answer.) 3. Bernie Cooper, front-desk lady in the council's Anchorage office, and her daughter Raymie Hamann caught kings and reds at the mouth of the Eklutna River. 4. Committee volunteer Denise Saigh hiked Devil's Pass. 5. Valdez Project Manager Tony Parkin spent much of the summer doing what many cabin owners do: working on the cabin! 6. Community Liaison Linda Robinson caught her first silver salmon on rod and reel. 7. Tamara Byrnes, administrative assistant in the Valdez office, gardened with a little help from her dog. 8. Committee Volunteer Roger Green visited Hudson Bay, which looks like Alaska, even if it's not. 9. Board member Steve Lewis of Seldovia spent a good deal of the summer "chained" to various chores on his newly acquired boat, the Saben. 10. Valdez Project Manager Tom Kuckertz and wife Sue boated out to Columbia Glacier. 11. Board member Jo Ann McDowell welcomed playwright Edward Albee to the theater conference in Valdez. 12. Deputy Director Marilyn Leland took a run to Sheep Mountain in her Miata with the Alaska Miata Club. (Answer to No. 2: Rhonda is second from the left.)



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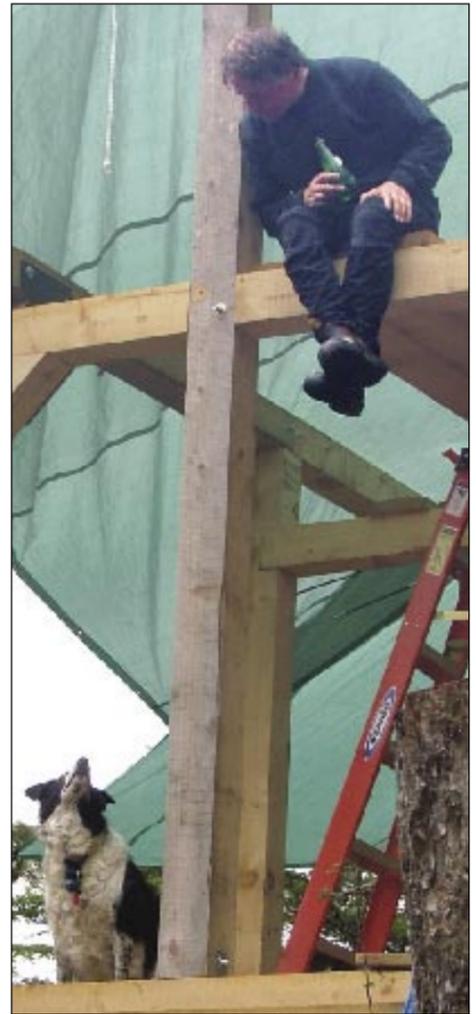
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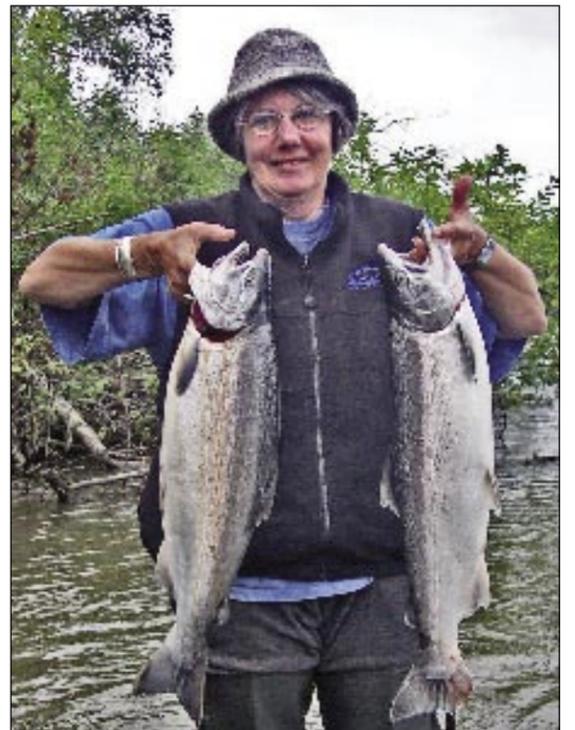
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Alyeska Viewpoint

Response to Jack Bay diesel spill was more effective than suggested by article in *Observer*

Earlier this year, during scheduled fishing vessel training, SERVS responded to a diesel spill in Jack Bay near Valdez. This spill was released all at once from the tug *Pathfinder*. SERVS used a variety of containment and recovery tactics, including U-boom, Current Buster boom, absorbents, and an inclined plane skimmer, the *Valdez Star*, to respond to the spill. Fishing vessels with their highly trained crews were used extensively and recovered much of the spilled diesel fuel. In fact 10 large bags of absorbents soaked with diesel fuel that had reached the water were recovered, which yielded an estimated 25 gallons of diesel product, or about 50 percent of the amount believed to have been spilled. Like virtually all diesel spills that occur near the shore, some product hit the shoreline, and some passed beneath the containment boom.

In May the *Observer* ran an article critical of SERVS response that concluded: "Whether the problems were a matter of technique, equipment, tactics, management, complacency, or outdated practices, the performance at Jack Bay was unacceptable." The article also included the statements "it was a largely ineffective response," "the Jack Bay spill clearly suggests major gaps in SERVS' response system," and "much

of the post spill briefing was focused on what went right, rather than the fact that the response was almost completely ineffective." These comments don't reflect the record, and we think it important to provide *Observer* readers with another look at the Jack Bay response.

According to NOAA, mechanical recovery (the method mandated by the state and preferred by the citizens' council) typically recovers 10-30 percent of spilled diesel fuel. When the F/V *Windy Bays* sank in August 2001 and her diesel fuel leaked into the sound, SERVS recovered an estimated 60 percent which was deemed by the citizens' council to be a "fine job on the clean up." If 10-30 percent recovery is typical, and 60 percent recovery is "fine," it seems curious for the *Observer* to refer to 50 percent recovery in the case of the Jack Bay response as "ineffective."

There are other parallels between the F/V *Windy Bay* response and the Jack Bay response, among them:

- Neither vessel spilling the fuel was covered under a response plan that

designates Alyeska as the response organization. SERVS did not have a legal obligation to respond in either case.

- Both spills involved diesel. Diesel is notoriously difficult to recover. It slips under containment boom easily, and quickly loses its ability to be recovered with absorbents, a fact recognized by both the Coast Guard and one of the council's board members at a May review of the response.

- Similar response tactics were used on both spills - containment boom, including Current Busters, absorbents, and an inclined plane skimmer.

- Results of the responses were similar: A calculated recovery of more than 50 percent in one case, and a calculated recovery of 60 percent in the other case. In both cases, some diesel hit the beaches, notwithstanding a generally successful response.

- Post-spill debriefs were held in each case to discuss the pluses and minus of the response, as is customary in post-incident lessons learned reviews, and consistent with Alyeska's culture.

The Coast Guard and Alaska Department of Environmental Conservation respond to roughly 30 diesels spills a year in Prince William Sound. From 1996-2002 (excluding the F/V *Windy Bay*, a 36,000 gallon spill), these spills averaged 200 gallons each. Considerably fewer resources are used on these other diesel spills than SERVS and Crowley Marine Services used on the Jack Bay spill. In many cases no clean-up is even attempted. Particularly with diesel, some portion of a spill close to shore is likely to reach the shore - as happened in the case of both the *Windy Bay* and Jack Bay responses. In neither case did the response "fail." Instead, both incidents drive home the importance of prevention, and the challenge of response once product is on the water.

SERVS spends thousands of hours each year drilling, testing equipment, and analyzing our tactics in conjunction with the regulators and interested stakeholders, including the citizens' council. We believe the facts about the Jack Bay incident support a conclusion that this response was effective and a demonstration of SERVS' commitment and competence.

• Ed Morgan is manager of Alyeska's Ship Escort/Response Vessel System



Ed Morgan

ConocoPhillips under scrutiny for tanker spills

As the *Observer* went to press, Alaska's biggest oil producer and shipper was under investigation by state and federal agencies for possible unreported spills and other violations on three of its tankers in the North Slope crude oil trade.

John Devens, executive director of the citizens' council, was briefed on the investigations last month by Bob Lindsay, president of ConocoPhillips' shipping subsidiary, Polar Tankers. The briefing came at Devens' request after rumors of the incidents reached the council.

According to Devens' briefing from Lindsay, the incidents were as follows:

- The Coast Guard issued a letter of warning to the company for failure to report a March 16, 2004, spill of bunker fuel to the deck of the tanker *Polar Endeavour*.

- A federal criminal investigation is under way for a spill to deck that took place on January 16, 2004, on the *Polar Discovery*. Content from the engine room sludge tank was allegedly pumped through the *Discovery's* piping system to the deck slop tank. A drain line had been inadvertently left open and oily water escaped to the deck, with an unknown amount reaching the water. The incident was not reported to the

A note from the Executive Director

Completing the record on the Jack Bay spill

As always, the citizens' council is happy to make space available in the *Observer* for the *Alyeska Viewpoint* column. In this issue, Alyeska presents its opinion on the Jack Bay diesel spill, which it has every right to do.

However, we believe this *Viewpoint* column omits some of the facts necessary to give our readers the full context needed to evaluate the effectiveness of Alyeska's response in Jack Bay. We urged Alyeska to add this information to the column, but the company declined. We decided, after much thought, to provide the missing information in this form.

First, it is important to note that the *Pathfinder*, which spilled the diesel, is a SERVS contractor and is

essentially an Alyeska vessel. And when Crowley Marine Services - the operator of the *Pathfinder* - requested to conduct its own response to the spill, SERVS instead took responsibility and was hired by Crowley to conduct the response. While SERVS may not have been legally required to respond to the spill, it did take on that responsibility, and so had a duty to perform in the same manner it would for a legally required response.

In addition, the *Windy Bay* and Jack Bay spills were different in so many respects they are hard to compare. In particular, the *Windy Bay* spill occurred several miles from the SERVS base with no SERVS response equipment on hand, while the Jack Bay spill occurred during

a SERVS drill, with large amounts of equipment and personnel on hand. Thus, if they were to be compared, it would seem a higher recovery rate would have been expected at Jack Bay because of this ready availability of personnel and equipment.

Obviously, Alyeska and the council differ on many aspects of the Jack Bay response. However, we are in complete agreement with Mr. Morgan's comment above about "the importance of prevention, and the challenge of response once product is in the water." We look forward to continuing our work with Alyeska toward improvement on both fronts.

- John S. Devens, Ph.D.
Executive Director

Coast Guard as required by regulation or within the company as required by internal policies.

- A second criminal investigation is under way for the alleged intentional bypassing of the oily water separator on the *Polar Alaska*. This device is used to clean bilge or ballast water before it is discharged overboard.

The Environmental Crimes Unit of the state Department of Environmental Conservation is investigating the incidents, according to Leslie Pearson, a spill response manager for the agency. She said the Environmental Crimes Unit is working with the state Department of Law, which is coordinating with the U.S.

Justice Department.

In a written statement, ConocoPhillips told the *Observer* that its management "voluntarily reported these events to the authorities, and the company has been cooperative and will continue to cooperate fully with the appropriate authorities." ConocoPhillips also said it had conducted or was conducting its own investigations, but wouldn't comment farther.

"It appears Polar definitely had some operational problems on board the vessels that management was unaware of," Devens said. "But it also appears company officials took appropriate action when they found out about it, so

we're hopeful they'll get these problems under control before they lead to a bigger incident."

Lindsay and Antonio Valdes, general manager of ConocoPhillips Marine, were scheduled to discuss the incidents at the September board meeting of the citizens' council.

At *Observer* press time, it did not appear that any of the incidents under investigation occurred in 2003. ConocoPhillips was one of four companies that received Legacy Awards for operating without any spills in 2003, based in part on nominations by the citizens' council. (See "Legacy Awards," page 7.)

Tracking the Sound's environment

By Lisa Ka'aihue
Project Manager

After the *Exxon Valdez* oil spill of 1989, one of the problems with figuring out the extent of environmental damage was that there was no "before" to compare against the "after." There had been no long-term monitoring of Prince William Sound's health.

That changed with the passage of the Oil Pollution Act of 1990, which required environmental monitoring of the Sound.

Thus was born the council's Long-Term Environmental Monitoring Program. It started in 1993 at nine sites inside and outside the Sound. Its purpose is to detect oil pollution resulting from the operations of oil tankers and Alyeska's Valdez terminal. The council program is based on a national program called "Mussel Watch," which monitors levels of many toxic chemicals by analyzing the tissue of mussels collected from the seabed.

The council program now has ten sites. There are two in Port Valdez, five elsewhere in the Sound, two on the outer coast of the Kenai Peninsula, and one on Shuyak Island near Kodiak.

The two sites in Port Valdez receive the most intensive monitoring because they are so near the Alyeska tanker terminal. Mussels are collected there three times a year, and bottom sediments are collected as well.

Scientists visit the other eight sites twice a year to take mussel samples, but do not collect sediments.

The samples are shipped to a



Scientist Bill Driskell (upper photo) collects blue mussels (lower photo) from Sleepy Bay in Prince William Sound on a recent sampling trip. The council's environmental monitoring program collects the mussels twice a year from 10 intertidal sites inside and outside the Sound. Photos by Lisa Ka'aihue, citizens' council.

laboratory to analyze the tissue and sediment for hydrocarbons. Besides measuring the levels of hydrocarbons, the laboratory also "fingerprints" them, a process that tells where any crude oil in the mussels came from.

This technique can identify a long list of oils found in the Sound and nearby waters: North Slope crude; residual oil from the *Exxon Valdez* spill; oil products and discharges from the Alyeska terminal; oil from shale, coal or peat

deposits; oil seeps from the Gulf of Alaska; and oil spilled during the Good Friday earthquake of 1964.

The council program, now in its 11th year, is the longest continuous record of regular mussel sampling in the region. The results are summarized in an annual report for the council. So far, the results show that the sites monitored are typically free from levels of oil pollution that would cause concern under current standards. The levels in the Port Valdez samples tend to be higher, but they are still fairly clean sites.

The most significant oil pollution sources picked up the program were related to an oil spill in Port Valdez in 1994, a sheen that escaped from Alyeska's Ballast Water Treatment Facility in 1997, and oil from the *Exxon Valdez* that is occasionally evident at two sites heavily affected by the spill.

This year, the program will be expanded by adding sampling sites at Knight Island in a joint effort with NOAA's Auke Bay Laboratory. The expansion is being funded by the Exxon Valdez Oil Spill Trustee Council.

Long-term monitoring is time-consuming, expensive, and difficult to fit into short-term budget cycles of institutions. But its value cannot be overstated. Such long-term sets of biological data are important in documenting ecosystem changes and determining if the changes are due to natural causes, such as variations in weather patterns, or to human causes, such as oil transportation activities.

Study finds hydrocarbons in snow around Valdez

By Jonathan P. Bower

I've been a volunteer on the Terminal Operations and Environmental Monitoring committee (or TOEM) of the citizens' council for almost three years. I became involved while attending Prince William Sound Community College. Through science and math courses offered in Valdez, I became greatly interested in environmental science, which I am now studying at the University of Alaska Southeast in Juneau.

This spring, I took a course on Snow and Glaciers. I was particularly interested in snow, especially its chemical nature and the way it interacts with the environment. For instance, falling snow can trap chemicals found in the lower atmosphere. These compounds can then accumulate in the snowpack, to be released to the environment during spring melt.

Through my experience with TOEM, I became interested in the fate of a class of volatile organic compounds known as BTEX. These include benzene, toluene, ethylbenzene, and xylene, which are known to be emitted at the trans-Alaska Pipeline terminal in Valdez. Some of these compounds, such as benzene, are documented health hazards, and have been a concern of the council since its inception.

As my term project, I studied the chemical makeup of snowpacks in and around Valdez. I wanted to see if air-

borne chemicals such as BTEX were being trapped and stored in the snow.

I chose seven sites for snow sampling in the Valdez region: one in the city of Valdez, one on the south side of



For his study, Jonnathan Bower took samples from pits like this one dug in the snowfields around Juneau and Valdez. Only the Valdez-area samples contained hydrocarbons. Photo courtesy of Jonathan Bower.

Port Valdez near the Alyeska terminal, one halfway between the Valdez airport and Valdez Glacier, one in Keystone Canyon, and three at various elevations in Thompson Pass. For comparison, snow samples were also collected at three sites on Douglas Island near

Juneau in Southeast Alaska.

Volatile organic compounds were present at all seven Valdez locations, including ethylbenzene, xylenes, and tri-substituted benzenes. Total loading of these compounds averaged an estimated 10.8 grams per acre. No volatile organics were detected in samples collected at any of the Juneau locations.

This study shows that volatile organic compounds similar to those emitted by the Valdez tanker terminal are indeed making it into the snowpacks around Valdez. However, it does not show whether the terminal is the source of the chemicals found in the snow. Nor does this study show whether Valdez residents should have health concerns about these levels of pollutants in the snow.

But I believe the study does show that further investigation is warranted so that Valdez residents can have answers to these important questions, and so we can better understand what happens to volatile organics when they enter the environment.

With the assistance of professors at the University of Alaska Southeast, a complete manuscript of this study is in preparation, and will be presented in the "Pollutant Transport, Cycling, and Fate" poster section of the Society of Environmental Toxicology and Chemistry Convention in Portland this November.

Legacy awards go to tanker companies

The four tanker companies that haul North Slope crude out of Valdez received awards this summer for getting through the year 2003 without spilling a drop of oil to salt water.

The recognition came from the Pacific States/British Columbia Oil Spill Task Force in the form of Legacy Awards, given annually for work that demonstrates innovation, management commitment, and improvements in oil spill prevention, preparedness, or response.

The companies involved were: Alaska Tanker Company, which operates ships for BP; ConocoPhillips' Polar Tankers subsidiary; Exxon's SeaRiver Maritime, and Seabulk Tankers, which operates ships for Tesoro.

The citizens' council nominated the companies after the spill-free record for 2003 became known.

"It is widely acknowledged that the TAPS trade route is one of the most challenging transportation routes," wrote Executive Director John Devens in the council's letter of nomination. "Therefore, we view a spill-free year as a significant milestone."

The task force is a consortium of environmental agencies in British Columbia and the U.S. Pacific Coast states. Alaska is represented by its Department of Environmental Conservation. The task force's mission is to foster coordination and collaboration on oil spill prevention and response policies among the agencies that make it up.

"We're probably better known for criticizing the oil industry than for praising it," Devens said. "But we're much happier pointing out successes than problems, and we were glad to be able to do it in this case."

Will Jenkins, president of SeaRiver, wrote to thank the council for the nomination, but said the company wasn't yet satisfied.

"We are confident that with the collaborative support of those who share in the common goal of achieving safe and efficient marine transportation, such as the Prince William Sound Regional Citizens' Advisory Council, we will continue to build on our success," Jenkins wrote.

Non-indigenous species meeting



The Western Regional Panel on Aquatic Nuisance Species met Sept. 8-10 in Anchorage. Here, Tom Colby of Alaska Tanker Co. describes the firm's experiments in using ozone to kill non-indigenous species in ballast water. Marilyn Leland, deputy director of the council, serves on the panel. Photo by Stan Jones.

Citizens' councils team up at Kenai celebration

On August 28, our council joined the Cook Inlet Regional Citizens' Advisory Council in celebrating Kenai's Industry Appreciation Day. This community picnic was an opportunity for both the citizens' councils to distribute information about our work.

The city of Kenai and its close neighbor Soldotna are located on the Kenai Peninsula on the glacier-fed Kenai River about three hours from Anchorage by road. Visitors and residents enjoy easy access to salmon, halibut, and trout fishing, and razor clam digging. The Kenai Peninsula Borough is represented on the council by Blake Johnson, and Jerry Brookman of Kenai chairs the council's Oil Spill Prevention and Response Committee.

The site of modern Kenai was the home of the Dena'ina Indians prior to the 1700s. In 1778, Captain Cook sailed up what would be named Cook Inlet while looking for the Northwest Passage from the Pacific to the Atlantic.

Kenai was colonized by Russian traders in 1791, becoming the headquarters for the fur and fish trade in the Cook Inlet region. A fort was established in 1868-1870 after Alaska was purchased by the United States. Modern Kenai has a population of approximately 7,166 and is known for its world class king salmon fishing. Industries include oil, natural gas, commercial fishing and tourism.

Soldotna's first homesteaders were World War II veterans. They either traveled to Kenai and then hiked the eleven miles to Soldotna, or took a train to Moose Pass and traveled overland 70 miles. Soldotna has approximately 4,140 residents with many more living in the area but outside the city limits. It is primarily a residential and service-oriented community with many of its residents working outside the city in oil, gas, mining and commercial fishing.

Places of Refuge

A comment period will open October 1 to gather information on Places of Refuge in Prince William Sound. Since the Sound is widely used for marine commerce, there is always a chance that a leaking or disabled vessel may require a sheltered location with adequate water depth to repair or lighter the vessel. The information gathered will make it easier to decide where to do such repairs with the least effect on the environment.

A working group is compiling documentation that will outline the potential Places of Refuge, including information on habitat, tidal flats, birds, fish and shellfish, marine mammals, water depth and ownership.

For complete information please visit our web site, www.pwsrca.org, and use the link to the Alaska Department of Environmental Conservation web site. The intent of this program is to verify the information posted on web sites and to incorporate additional information using local knowledge. The comment period will go to Nov. 15.

On the Road Again

Tamara Byrnes from our Valdez office, recently equipped with a new display, attended the 4th of July Festival and the Goldrush Celebration, both held this summer in Valdez. She also assisted me in Anchorage at the Alaska Oceans Festival held July. This event focused on "our water planet" and had booths and activities from around Southcentral Alaska, including a touching tank brought by the Alaska SeaLife Center in Seward and the Department of Fish and Game Moveable Lab.

Upcoming events this fall include the Alaska State Chamber of Commerce meeting in Juneau, Fish Expo in Seattle and the Society of Environmental Toxicology and Chemistry conference in Portland, Oregon.

Community Corner



Linda Robinson



FUTURE PROJECT MANAGER? – This young visitor showed up to check out a couple of non-indigenous crab species at the citizens' council booth during the Alaska Oceans Festival in Anchorage in July.

Photo by Linda Robinson, citizens' council

Prince William Sound Regional Citizens' Advisory Council

The Prince William Sound Regional Citizens' Advisory Council is an independent, non-profit corporation formed after the 1989 Exxon Valdez oil spill to minimize the environmental impacts of the trans-Alaska pipeline terminal and tanker fleet.

The council has 18 member organizations, including communities affected by the Exxon Valdez oil spill and groups representing Alaska Native, aquaculture, environmental, commercial fishing, recreation and tourism interests in the spill region.

The council is certified under the federal Oil Pollution Act of 1990 as the citizen advisory group for Prince William Sound, and operates under a contract with Alyeska Pipeline Service Co. The contract, which is in effect as long as oil flows through the pipeline, guarantees the council's independence, provides annual funding, and ensures the council the same access to terminal facilities as state and federal regulatory agencies.

The council's mission: Citizens promoting environmentally safe operation of the Alyeska terminal and associated tankers.

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