

## SECTION C: APPENDICES

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- Appendix A: References
- Appendix B: Acronyms and Abbreviations
- Appendix C: Examples of Information Releases and Advisories from the *M/V Selendang Ayu* Fisheries Water Quality Sampling Program
- Appendix D: Sample Fisheries Workgroup Meeting Agenda and Meeting Summary
- Appendix E: Example of Sampling Plan
- Appendix F: Examples of Results Maps from *M/V Selendang Ayu* Water Quality Sampling Program
- Appendix G: ADFG Scientific Collection Permit for Fish

## APPENDIX A: References

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## APPENDIX B: Acronyms & Abbreviations

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AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADFG	Alaska Department of Fish and Game
ADIOS	Automated data inquiry for oil spills
ADNR	Alaska Department of Natural Resources
API	American Petroleum Institute
BOF	Board of Fisheries
CFEC	Commercial Fisheries Entry Commission
CFR	Code of Federal Regulations
CPUE	Catch per unit effort
EEZ	Exclusive Economic Zone
EH	Environmental Health (ADEC)
EPA	US Environmental Protection Agency
EPIRB	Emergency Position Indicating Radio Beacon
F & E	Fate and Effect
GPS	Global positioning system
ICS	Incident Command System
IFO	Intermediate Fuel Oil
IPHC	International Pacific Halibut Commission
kts	knots
LLC	Limited Liability Company
mg/l	Milligrams per liter
mm	Millimeters
M/V	Motor vessel
nm	nautical miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
PDF	Personal Flotation Device
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
RLS	Request for Laboratory Services
SCAT	Shoreline Cleanup and Assessment Team
SMART	Special Monitoring of Applied Response Technologies
STAR	Spill Tactics for Alaska Responders Manual
TAH	Total Aromatic Hydrocarbons
TAqH	Total Aqueous Hydrocarbons
TPH	Total Petroleum Hydrocarbons
UC	Unified Command
USFDA	United States Food and Drug Administration
UV	Ultraviolet

## APPENDIX C: Examples of Information Releases and Advisories from the *M/V Selendang Ayu* Fisheries Water Quality Sampling Program



FEBRUARY 25, 2005

### NOTICE TO FISHING VESSELS OPERATING IN STATE WATERS FROM SPRAY CAPE SOUTH TO UMNAK PASS

Cooperative efforts between the fishing industry, the State of Alaska and the *M/V Selendang Ayu* Unified Command continue with the goal of collecting data and taking steps to minimize the risk of oil contamination in fish/shellfish.

Results from overflights, shoreline surveys, and water quality sampling in state waters from Spray Cape south to Umnak Pass have shown that random, widely dispersed, small tar balls may be present in these waters. The risk to commercial fisheries is believed to be minimal; however the Unified Command recommends that all fishing vessel operators who operate in this area be aware of the following information:

- Aerial observations from overflights conducted from 12/12/04 through the present have shown little or no oil on the surface of the water. Occasionally, sheens have been observed immediately adjacent to areas of heavy oiling in Skan and Makushin Bays during spring tides.
- Shoreline surveys conducted from 12/27/04 to 2/5/05 have shown isolated areas of light to moderate oiling of the shoreline from Spray Cape south to Kismaliuk Bay.
- A water quality sampling program conducted in state waters from Spray Cape south to Umnak Pass from 2/5/05 through 2/12/05 showed the presence of small, randomly scattered tarballs in the upper water column (depths ranging from 2-10 feet below the surface) in Umnak Pass, Chernofsky Harbor, Kismaliuk Bay, Alimuda Bay, Kashega Bay, and Pumicestone Bay. Intermittent sampling of the seafloor in these areas using longline gear rigged with sorbent snares found no evidence of bottom oiling.
- Shoreline cleanup activities have been suspended through approximately April 15, 2005. When cleanup activities are resumed, the potential may exist for remobilization of oil in cleanup areas. Vessel operators should be aware of this potential when fishing in areas near shoreline cleanup sites.
- For the latest information about oiling observations, visit the Unified Command website at [http://www.state.ak.us/dec/spar/perp/response/sum\\_fy05/041207201/041207201\\_index.htm#oiling](http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/041207201_index.htm#oiling)

The Alaska Department of Environmental Conservation (ADEC) Division of Environmental Health will continue with enhanced seafood inspection procedures for seafood caught in the Unalaska area, including state waters from Spray Cape to Umnak Pass. Vessel operators and crew members are encouraged to inspect catch and gear for signs of oiling, and to report any oil observations to ADEC. A complete advisory on the seafood inspection process is available at: [http://www.state.ak.us/dec/spar/perp/response/sum\\_fy05/041207201/fish/041207201\\_seaf\\_adv\\_01.pdf](http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/fish/041207201_seaf_adv_01.pdf)



### Unified Command: M/V Selendang Ayu Grounding

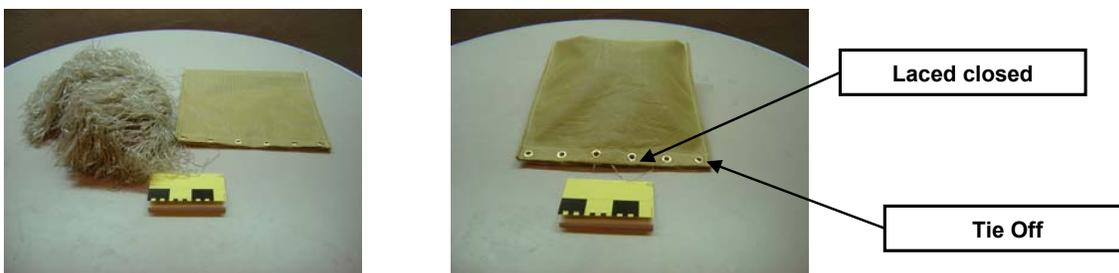
JANUARY 31, 2005

#### NOTICE TO PACIFIC COD AND POLLOCK CATCHER BOATS

Cooperative efforts between the fishing industry, the State of Alaska and the M/V Selendang Ayu Unified Command continue with the goal of collecting data and taking steps to minimize the risk of oil contamination in fish/shellfish.

Pacific cod and pollock catcher boats delivering their catches into the Dutch Harbor/Unalaska area are being asked to install and maintain oil detection “pom pom packs” in their RSW tanks.

The “pom pom packs” will consist of a mesh bag enclosing “pom pom snare material” designed to attract and capture floating oil contaminants. The bag assemblies will be provided to catcher boats.



Each vessel is also asked to provide a small trawl float and to secure each “pom pom pack” with the float to keep the bag near the surface of the water inside each RSW tank.

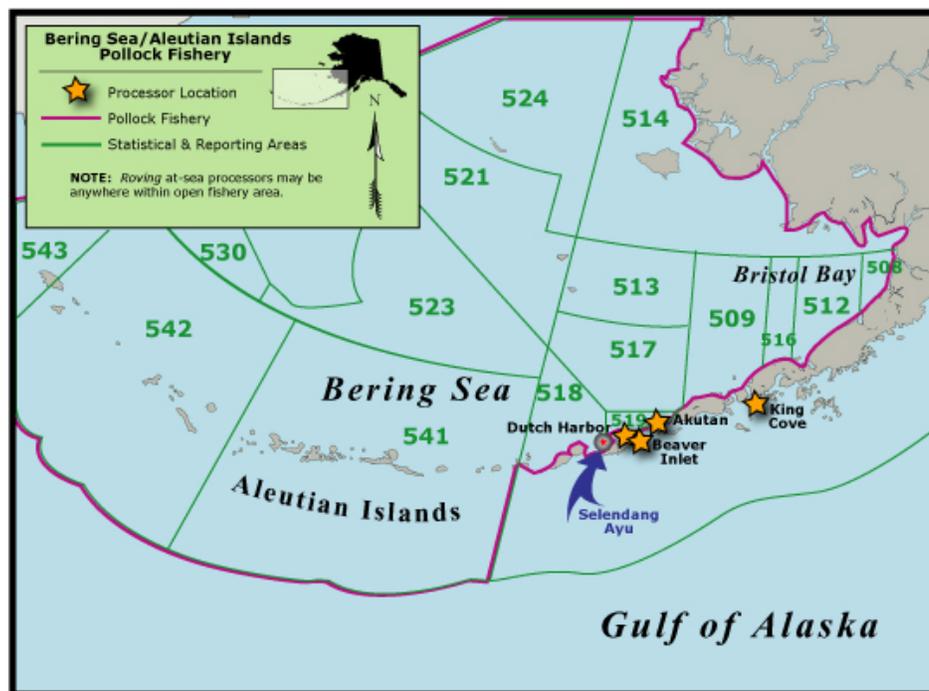
Please secure the “pom pom pack” in the tank prior to tank down. **REMOVE THE PACK FROM THE TANK** and check it for signs of oil contamination before the fish are placed in the tank. Inspection should include smelling for oil and looking for tar balls or others contamination both on the outside of the bag and on the pom poms inside. Also, please check the tank for any oil sheen. If oil contamination is found please :

- Please place the contaminated pack in the plastic bag provided and enter the date, vessel name and location (lat x long) into the vessel's log and on the bag.
- Notify your processor who will notify the Alaska Department of Environmental Conservation, (Rebecca Sheffield, tel 581-4632 and cell 391-2118)
- Alaska Department of Environmental Conservation inspectors will retrieve the contaminated pack upon vessels return to port.
- Follow your regular tank cleaning procedures.

If no oil contamination is detected store the pack where it will not be contaminated. The mesh bags and pom poms are made to be reused during the season.

M/V Selendang Ayu Oil Spill Response – Fishery Fact Sheet #5 – EBS/AI Pollock

**Bering Sea/Aleutian Islands Pollock Fishery “A Season”**

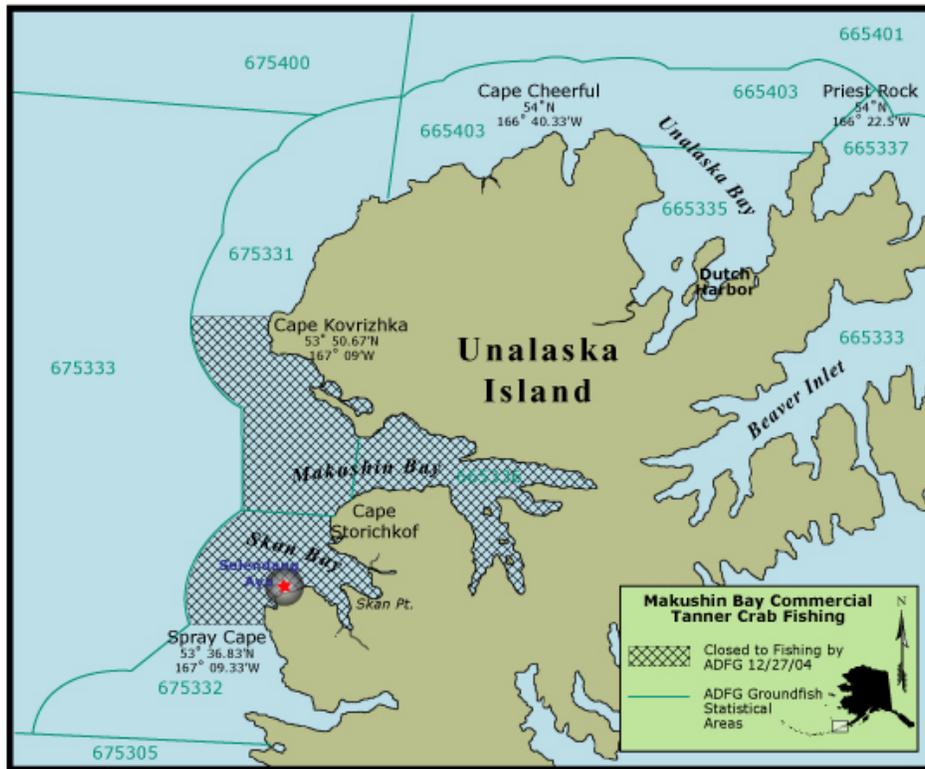


<b>Fish Species</b>	<i>Theragra chalcogramma</i>	<b>Location of Fishery</b>	EBS & AI. Fishing is concentrated north & west of Unimak Island
<b>Harvest Level</b>	EBS -1,478,500 mt AI – 19,000 mt Bogoslof – 10 mt Quota split between A & B seasons	<b>Number of Vessels</b>	Approx. 60 catcher vessels, 20 factory vessels & 3 mother ships; quota is divided 50% catcher, 40% catcher/processor & 10% mothership
<b>Registration</b>	Federal permit required <a href="http://www.fakr.noaa.gov/rm/ffpfp.htm">http://www.fakr.noaa.gov/rm/ffpfp.htm</a>	<b>Sea water Circulation</b>	Refrigerated Sea Water (RSW), no live hold
<b>Open Date</b>	1/20/05	<b>Management Agency</b>	NMFS
<b>Close date</b>	3/25/05	<b>Gear Type</b>	Trawl
<b>Shore-based Processors</b>	Dutch Harbor, King Cove, Akutan, Beaver Inlet; shore-based fleet comes ashore every 2 days or so	<b>At-sea or catcher-processors</b>	Catcher-processors, floating processors & mother ships
<b>Other</b>	Sea Lion conservation areas (SCA) affect catch limits in some areas.	<b>2005 Fishery Status</b>	Closures to inshore waters - Skan & Makushin Bays by ADFG 12/27/04

For more information contact NMFS Alaska Groundfish Management - Andy Smoker, (907) 586-7210 or Rance Morrison (907) 581-2062, or visit <http://www.fakr.noaa.gov/sustainablefisheries/default.htm>.

M/V Selendang Ayu Oil Spill Response – Fishery Fact Sheet #1 – Makushin Tanner Crab

**Makushin Tanner Crab Fishery**



<b>Fish Species</b>	Tanner Crab {Chionoecetes bairdi}	<b>Location of Fishery</b>	Makushin ADFG statistical areas 675332, 675331, 665336
<b>Harvest Level</b>	Quota 171,453 lbs	<b>Number of Vessels</b>	55 (final)
<b>Registration Deadline</b>	12/27/04	<b>Sea water Circulation</b>	Yes – sea water is continuously circulated through live tanks
<b>Open Date</b>	January 15, 2005 - Noon	<b>Management Agency</b>	Alaska Department of Fish and Game (ADFG)
<b>Close date</b>	At quota, no later than 3/31/05	<b>Gear Type</b>	Crab Pots
<b>Processors</b>	Shore-based only - Dutch Harbor/Unalaska	<b>Transit Route</b>	Nearshore transit northeast around Unalaska Island to Unalaska Bay
<b>2005 Fishery Status</b>	Closed until further notice – 12/27/04		

For more information contact ADFG Commercial Fisheries Area Management Biologist, Forrest Bowers (907) 581-1239, or visit [http://www.state.ak.us/dec/spar/perp/response/sum\\_fy05/041207201/041207201\\_closure.pdf](http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/041207201_closure.pdf)

IMC • United States Coast Guard • Alaska Department of Environmental Conservation



U.S. Department of  
Homeland Security  
United States  
Coast Guard



Alaska Department of  
Environmental  
Conservation



Unified Command: *M/V Selendang Ayu Grounding*

## Seafood Advisory

### SEAFOOD INSPECTION ACTIVITIES IN RESPONSE TO M/V SELENDANG AYU OIL SPILL

Monday, January 10, 2005

#### Goal:

To ensure that all seafood products from areas being harvested adjacent to the oil spill impact area are wholesome and safe for the consuming public.

#### Outreach:

The Department of Environmental Conservation (DEC) has contacted seafood processing facilities, and has asked them to be extra vigilant in their inspection of all products being delivered to their facilities, and the vessels making the deliveries.

#### Fishing Vessels:

- check fishing gear, hull, deck, equipment, work clothing, and all other items that come in contact with catch.
- check catch for signs of oil contamination.
- report any signs oil, contaminated gear or product to DEC.

#### Processor:

- visually inspect fishing vessel hull, deck, fish hold, equipment, work clothing, and all other items that come in contact with catch at time of delivery.
- will ask for location vessels were fishing if in proximity to impact area.
- will inspect all seafood products, and report any signs of contamination to DEC.
- segregate any loads of seafood in question, and inspect handling equipment.
- maintain detailed records.

#### DEC:

- will have additional inspection staff in Dutch Harbor/Unalaska during the upcoming fisheries.
- will monitor all activities in the area for signs of oil contamination.
- will inspect vessel hull, deck, fish hold, equipment, work clothing, and all other items that come in contact with catch.
- will inspect processing facility unloading, handling and processing equipment, worker clothing, and all other items that come in contact with product.
- will inspect seafood products for signs of oil contamination.
- any oil contaminated product will be isolated and held pending a final investigation.

#### For more information contact:

Seafood Processing and Development, Environmental Health Division, Alaska Department of Environmental Conservation  
555 Cordova St., Anchorage, AK 99501-5948  
Phone: (907) 269-7501, FAX: (907) 269-7510



## Alaska Department of Environmental Conservation

Division of Environmental Health  
Division of Spill Prevention and Response

### ADEC Threatened Water Body Finding

December 27, 2004

This finding is made for the grounding of the *Selendang Ayu* and applies to state-waters in the spill impact zone between Cape Kovrizhka (53 degrees, 50.67 minutes N lat.; 167 degrees, 09 minutes W long.) and Spray Cape (53 degrees, 36.83 minutes N lat.; 167 degrees, 09.33 minutes W long.) - Unalaska, Island - including Makushin and Skan Bay. The following information has been considered in assessing the potential threat of oil contamination to these waters.

- The presence of oil on water and on shorelines has been documented in these areas by observations from overflights and response vessels.
- The presence of oil in the water column or on the bottom is unknown.
- It is not possible to stabilize the vessel or fuel tanks of the *Selendang Ayu* to prevent further releases.
- There is a continuing threat of additional releases from the casualty that may occur unpredictably and in unknown volumes due to storms or further structural failure or for other unanticipated reasons.
- The threat of additional releases will not be abated until lightering operations have been successfully concluded on January 31 as currently planned.
- Lightering operations may be a source of a release.
- Response operations including oil tracking, oil containment and recovery, wildlife rescue, shoreline surveys and shoreline cleanup will be ongoing in these areas when conditions allow. On going response operations may interfere with fishing vessels or preferred fishing areas or inadvertently introduce contamination by the nature of the activity.
- Re-oiling from contaminated shorelines is a potential source of contamination.
- Increased vessel traffic may result in hull contamination from outside the spill impact zone that would cause tracking to fishing areas in the spill impact zone. Similarly hull contamination may occur within the spill impact zone and be tracked to uncontaminated areas that may jeopardize other fishing operations outside the spill impact zone.

### **FINDING**

This information supports a department "finding" pursuant to 18AAC 34.600 that the oil spill threatens to contaminate the body of water identified as the spill impact zone.

## INTERNATIONAL PACIFIC HALIBUT COMMISSION

*News Release*


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 P.O. Box 95009, SEATTLE, WASHINGTON 98145-2009

March 3, 2005

**NOTICE TO COMMERCIAL AND RECREATIONAL HALIBUT FISHING VESSELS  
OPERATING IN ALASKAN STATE WATERS FROM  
CAPE KOVRIZHKA SOUTH TO UMNAK PASS**

The International Pacific Halibut Commission, in cooperation with the M/V *Selendang Ayu* oil spill Unified Command, advises all halibut fishers operating in state waters from Cape Kovrizhka south to Umnak Pass in Area 4A to exercise caution when fishing in these waters, due to residual effects from the oil spill. The following observations are meant to aid fishers in avoiding oil contaminated waters.

Results from overflights, shoreline surveys, and water quality sampling in state waters from Cape Kovrizhka south to Umnak Pass have shown that random, widely dispersed, small tar balls may be present in these waters. Tar ball concentrations appear to be highest in Makushin Bay and in Skan Bay east of the wreck. The risk to commercial fisheries is believed to be minimal; however, the Unified Command recommends that all fishing vessel operators who operate in this area be aware of the following information:

- Aerial observations from overflights conducted from December 12, 2004 through the present have shown occasional, light sheens to be present immediately adjacent to areas of heavy oiling in Skan and Makushin Bays, particularly during spring tides.
- Shoreline surveys conducted from December 27, 2004 to February 5, 2005 have shown areas of light, moderate, and heavy oiling in Skan and Makushin Bays and isolated areas of light to moderate oiling of the shoreline from Spray Cape south to Kismaliuk Bay.
- Results from water quality sampling surveys near heavily oiled shorelines in Makushin and Skan Bays detected tarballs, smears, stains and other evidence of oil in both the water column and on the bottom longline gear set on the seafloor encountered isolated tarballs at depths ranging from 15 to 105 fathoms. No oil was observed on crab or fish caught in this area.
- The State of Alaska has closed the area from Cape Kovrizhka south to Spray Cape to all commercial fishing, except for halibut fishing. ***Commercial halibut vessels should be aware that the state's "zero tolerance" policy is in effect for seafood caught in this area. All halibut caught within the closed area from Cape Kovrizhka south to Spray Cape will require mandatory inspections by the State of Alaska prior to processing. If oil is observed anywhere on the catch, gear, or vessel, the load cannot be landed.*** A complete advisory on the seafood inspection process is available at:  
[http://www.state.ak.us/dec/spar/perp/response/sum\\_fy05/041207201/fish/041207201\\_seaf\\_adv\\_01.pdf](http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/fish/041207201_seaf_adv_01.pdf)

## APPENDIX D: Sample Fisheries Work Group Meeting Agenda and Meeting Summary

<p><b><i>M/V Selendang Ayu</i></b>  <b>Oil Spill Response</b>  <b>Fisheries Issues Work group</b></p>	<p><b>January 13, 2005</b>  <b>2:00 PM</b>  <b>Makushin Room, Grand Aleutians Hotel</b>  <b>Via Teleconference</b>  <b>Phone-In Number – 800.820.4690</b>  <b>Participant Code - 7024993</b></p>
<p><b>Purpose of Meeting:</b>                  This is the seventh meeting of the <i>ad hoc</i> work group established to review available data regarding Aleutian Islands and Bering Sea fisheries that may be impacted by the December 7, 2004 <i>M/V Selendang Ayu</i> oil spill at Unalaska Island. The primary purpose of this meeting is to review information regarding tar patties that were observed in Captain’s Bay on 1/12/05.                  Invited Attendees: Representatives of ADFG, NMFS, ASMI, ADEC, City of Unalaska, NOAA, contractors</p>	
<p><b>Draft Agenda</b></p>	
<p><b>Introductions and Opening Comments</b> ..... Larry Dietrick, ADEC/SPAR  <b>Situation Brief – Captain’s Bay</b>..... Gary Folley, SOSC  <b>Threatened Water Body Considerations</b>.....Larry Dietrick  <b>Unalaska Bay Tanner crab fishery</b> ..... Group  <b>Processor intake/outfall locations and implications</b>.....Rebecca Sheffield, ADEC/EH  <b>Sampling Program Update</b> ..... Elise DeCola, Nuka Research  <b>Potential Use of Fluorometry in Sampling Program</b>.....David Mora, Nuka Research  <b>Update on operational advisory to snow crab fleet</b> ..... Chris Woodley, USCG  <b>Review Action Items</b>..... Sierra Fletcher, Nuka Research  <b>Next Meeting &amp; Date/Time</b>..... Group  <b>Final Comments</b>..... Group</p>	
<p><b>Meeting Materials</b> *All meeting materials are <b>CONFIDENTIAL</b> - not for distribution.*</p>	
<p>1. Summary of 1/10/05 meeting                  2. Captains Bay tar patty pictures and map                  3. Updated Results Map from Unalaska Bay &amp; Akutan trips                  4. Water Quality Sampling Fact Sheet                  5. Operational Advisory to Crab Fleet</p>	
<p><b>Websites of Interest:</b>                  Additional information about the oil spill is available through the Unified Command website at  <a href="http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/041207201_index.htm">http://www.state.ak.us/dec/spar/perp/response/sum_fy05/041207201/041207201_index.htm</a></p>	
<p>Contact person for additional information: Elise DeCola, elisedecola@nukaresearch.com, 907 581-3844 ext 127 (Grand Aleutian); 907 359-9429 (cell)</p>	

*M/V Selendang Ayu Oil Spill***M/V Selendang Ayu Oil Spill Fisheries Issues Work Group****Meeting Summary from 1/13/05**

On December 20, 2004, an *ad hoc* work group was established to review available data regarding Aleutian Islands and Bering Sea fisheries that may be impacted by the December 7, 2004 *M/V Selendang Ayu* oil spill at Unalaska Island.

The seventh meeting of this group was held on 1/13/05 at the Grand Aleutian Hotel, Makushin Room, in Unalaska. The primary purpose of this meeting is to review information regarding tar patties observed in Captain's Bay on 1/12/05.

Invited Attendees: Representatives of ADFG, NMFS, ASMI, ADEC, City of Unalaska, NOAA, contractors.

The following individuals were in attendance. Many participated via teleconference.

Forrest Bowers, ADFG/CF	Greg Challenger, Polaris
Elise DeCola, Nuka Research	Larry Dietrick, ADEC/SPAR
Wayne Donaldson, ADFG/CF	Sierra Fletcher, Nuka Research
Gary Folley, ADEC/SOSC	Frank Kelty, City of Unalaska
Denby Lloyd, ADFG	Gary Mauseth, Polaris
Bill McLellan, MR & Assoc.	David Mora, Nuka Research
Ron Morris, FOSSC	Rance Morrison, NMFS
Leslie Pearson, ADEC/SPAR	Randy Rice, ASMI
Tim Robertson, Nuka Research	Rebecca Sheffield, ADEC/EH
Manuel Soares, ADEC/EH	John Whitney, NOAA/SSC
Chris Woodley, USCG	CDR Harrison, USCG
Shirley Marquardt, Mayor	Alyssa McDonald, Council member
Laura Fleming	Andrew Graham, Polaris

**Proceedings**

1. Larry Dietrick (ADEC/SPAR) defined the meeting's purpose as being to discuss the finding of tar balls in Captain's Bay.
2. Gary Folley (ADEC/SOSC) reported that on 1/12 tar patties were reported by a local resident on a beach on Captain's Bay. They had reportedly been found a couple of days before. A total of 26 or 27 tar patties were mixed with grasses, and one observer reported associated soybeans as well. Size ranged from smaller than a golf ball to larger than a laptop computer. The findings were presented at a community meeting and the priority set to check the area again, but no overflight has been possible due to inclement weather. Elise DeCola (Nuka Research) added that a sampling vessel found a 6-8" tarball floating near the head of Captain's Bay while towing in that area. Shore sections DUT-1, 2, 3, and 4 have been SCATed with no findings outside segment DUT-2.
3. Elise Decola (Nuka Research) summarized the offshore sampling work done since the 1/10 meeting. The *F/V Exito* was tasked offshore for signs of tarballs, up to 25 miles outside the bay with intermittent tows. No findings. The *F/V Alaska Lady* towed roughly the route that will be followed by the fishing vessels across the passes, 20 miles off shore and then back into the

### *M/V Selendang Ayu Oil Spill*

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harbor. No findings. Overflights on 1/11 went approximately 10 miles off Unalaska Bay looking for convergence zones. No overflights on 1/12 or 1/13.

4. Forrest Bowers (ADFG/CF) questioned the probability that oil would have come off a beach and drifted to the location where the tar patties were found. Gary Folley (ADEC/SOSC) said it could have been remobilized or picked up in a convergence zone. The processors with whom he spoke confirmed that the oil could indeed have floated there. John Whitney (NOAA/SSC) agreed that secondary oiling was possible. Oil with grasses had been found in Anderson Bay from somewhere else. Agreed that tracking drift blocks would not be relevant, as they behave differently than the on-or-below surface tar patties.

5. The group was informed that the patties found had no associated sheen when in contact with the water. They were submerged when found—except the one found by the vessel which was floating at the surface—but small pieces floated when put back in the water. Remobilization could have come from oil sloughing off rocks due to wave action. Chris Woodley (USCG) added that it seemed unlikely the tar patties had been on the beach for long, as the area is fairly heavily used, including by the participants in the recent Christmas Day bird count. The source of the patties has not yet been confirmed. They will be sent to the lab for testing to determine the origin of the oil.

6. Elise DeCola (Nuka Research) then described the planned tasking of the 3 sampling vessels (the *F/V Northern Fury* was contracted this morning). The *F/V Alaska Lady* towed today in Akutan Bay with no hits as of the meeting at 1400. The *F/V Exito* towed in Unalaska Bay, focusing in on Captain's Bay. The *F/V Northern Fury* has set 5 pots in the Bay for seafood testing. If necessary, she will look into setting additional pots in Unalaska Bay to sample for seafood quality.

7. Larry Dietrick (ADEC/SPAR) clarified that the current level of findings do not warrant consideration of the Threatened Water Body designation, and, in fact, the current level of Environmental Health inspections exceeds the requirements that would be enacted by such designation.

8. There was a suggestion to look at the area between the shore where the tar patties were found and Westward Seafood Processors, as the facility is nearby.

9. Rebecca Sheffield (ADEC/EH) reported for the 3 inspectors now in town on information gathered from the processors: maps of intake locations (from 8-40'), saltwater usage (up to 1 million gallons/day), types of filtration used on intakes (1/8" screen), known background pollutants, treatment of saltwater used (chlorination), outflow locations, and uses of saltwater (washdown, fluming, cookers, etc...). Could be possible to put a snare in their systems. All were eager to cooperate and already have protocols in place to manage product appropriately in case of finding contamination. Buyers have asked for weekly updates. It was confirmed that the city could not sustain the water consumption if all the crab processors switched to fresh water. It was agreed that the 36,000 lbs. of Tanner crab coming in over 3 days and several processors would be well inspected. However, perception management remains an issue.

10. The question of whether crab pots being used for the fishery should be involved in any kind of sampling for oil, including the possibility of simply assessing each pot as there are only 5 per boat. It was agreed that the same protocols set up for the *Opilio* fishery would be used for the Tanner crab fishery, and the guidelines distributed as necessary. This will ensure that any oil

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*M/V Selendang Ayu Oil Spill*

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found through normal fishing operations is immediately assessed by the sampling team. This will be a good test of the system before the *Opilio* fishery begins.

11. Fluorometry may be used to monitor filter intakes.

12. Action items identified:

- a. Greg Challenger will get samples of the tar patties found to the lab for comparison sampling.
- b. Elise DeCola will check on the legal issues related to the number of pots that can be set by the vessels involved in sampling.
- c. Elise DeCola and Rebecca Sheffield will set up a plan with processors for heightened vigilance and protocols.
- d. Oil sighting report procedures prepared for the *opilio* fishery will be used for Tanner crab as well.
- e. Sampling, observational, and reporting procedures will be posted on the web.
- f. *F/V Northern Fury* will be on stand-by, or divert from tasking, to respond to oil findings from vessels participating in the fishery.
- g. Elise DeCola will keep the group updated via email. No further meetings scheduled, pending significant findings.
- h. The Environmental Unit should present an overall report to Unified Command.

**Meeting Materials** (distributed via e-mail)

\*All meeting materials are **CONFIDENTIAL**, draft work products and not for distribution beyond this work group until they are cleared for public release.\*

- a. Summary of 1/10/05 meeting [050110 Summary/pdf]
- b. Captains Bay tar patty pictures and map [050112 Captains Bay.pdf]
- c. Updated Results Map from Unalaska Bay and Akutan trips [050112-Akutan 3.jpg]  
[050112-UnAk.jpg]
- d. Water Quality Sampling Fact Sheet [Water Quality Fact SheetFINAL.pdf]
- e. Operational Advisory to Crab Fleet [Final Operational Procedures for Draft Transit Procedures – 2005 Opilio Crab Season Jan 12, 2005.pdf]
- f. Agenda for this meeting [050112FishAgenda.pdf]

## APPENDIX E: Example of Sampling Plan

**DRAFT** Proposal for Selendang Ayu Oil Spill Water Quality Sampling, 1/11-1/17/05

### **M/V Selendang Ayu Oil Spill Water Quality Sampling Program Proposal for Sampling to Occur 1/11/05 – 1/17/05**

This proposal describes the methods, goals, and objective for Phase 3 of the Selendang Ayu oil spill water quality sampling project. Phase 1 involved initial water quality sampling in the Makushin Bay and Skan Bay. Phase 2 involved water quality sampling in the Unalaska Bay tanner crab fishery area and a field screening trip to Akutan Island and Unimak Pass. Phase 3 will focus on the areas of Unalaska Bay, Akutan, and Unimak Pass that are potential transit routes for fishing vessels involved in the Bering Sea *opilio* crab fishery.

Data collected through the sampling program will be used to support the Unified Command's spill response decision making and Fisheries Manager's opening/closure decision making for the Unalaska Bay Tanner Crab and Bering Sea/Aleutian Islands Snow Crab fish resources, fisheries, and fish processors. The purpose of the project is to guarantee that no contaminated seafood enters the market and to ensure consumer confidence in Alaska seafood.

#### **Goal**

The primary goal of the water quality sampling program is to collect information regarding potential oil contamination, either as tar balls or dissolved phase oil, in waters that could impact fishery resources through direct oiling of the seafood or by impacting the transportation and/or processing of seafood products. Information gathered through this program will be used to ensure that seafood taken or transported through in these waters meet ADEC Division of Environmental Health's zero tolerance policy criteria for seafood quality.

#### **Objectives**

1. Determine if spilled oil (in the form of tar balls, tar patties, fresh oil, mousse, or other whole oil form) is present in the areas of Unalaska Bay, Akutan Pass, or other known transit areas utilized by the Bering Sea *opilio* fleet and in the Unalaska Bay Tanner crab fishery area.
2. Determine if tar balls, tar patties, fresh oil, mousse, or other forms of whole oil are present in the salt water systems of processors in the Dutch Harbor/Unalaska area.
3. Determine maximum distance from shore that oil (in the form of tar balls, tar patties, fresh oil, mousse, or other whole oil form) is present.

#### **Methods**

##### ***Tow Net Sampling***

A fine mesh tow net will be fitted with used to conduct a surface or subsurface trawl in the study area via the sampling vessel or a vessel of opportunity. The Sampling Group

**DRAFT** Proposal for Selendang Ayu Oil Spill Water Quality Sampling, 1/11-1/17/05

Supervisor will select tracks in the study area after consulting with ADEC, ADFG, NOAA and Polaris. Starting and ending date, time, location, and presence or absence of oil will be recorded for each tow. Average tow length will be approximately one hour, at a depth of approximately 3m, at speeds ranging from 2 to 4 kts. Further sampling will be based on the results of initial sampling. Field observations will be reported to the Environmental Unit Leader and the Sampling Group Supervisor.

***Seawater intake monitoring aboard sampling vessels***

Place an oil trap in the seawater intake of the sampling vessels and other vessels of opportunity as feasible. Examine the trap at regular intervals for the presence of oil and record observations. Field observations will be reported to the Environmental Unit Leader and the Sampling Group Supervisor. Any oil found will be forwarded to a laboratory to attempt to determine the source of the petroleum contamination.

***Seawater Intake monitoring at seafood processor***

Place an oil trap in the seawater system where continuous pumping of seawater occurs at the fish processing plants in Unalaska Bay and on mobile fish processors operating in and near Unalaska. Examine the trap daily for the presence of oil and record observations. Field observations will be reported to the Environmental Unit Leader and the Sampling Group Supervisor. Any oil found will be forwarded to a laboratory to attempt to determine the source of the petroleum contamination.

***Unbaited Crab Pots with oleophilic snare***

Commercial crab pots will be fitted with oleophilic oil snare on the pot (four corners) and every 30 feet on the buoy line to the crab pot. The Sampling Group Supervisor will select sampling stations in each study area after consulting with ADEC, ADFG, NOAA and Polaris. Sampling stations will include known convergence areas and areas in the Unalaska Bay region where oil has been reported through previous sampling surveys. Crab pots will be dropped on the seabed at the sampling stations and left for a period of 3-4 days and then examined for the presence of oil contamination on the oleophilic snare. Each snare will be examined by sight, smell and UV light for the presence of oil. Further sampling will be based on the results of initial sampling. Results will be reported to the Environmental Unit Leader and the Sampling Group Supervisor.

**Spatial Scope**

The geographic areas targeted during this sampling program will include the following:

- The Unalaska Bay area open to commercial Tanner (*bairdi*) crab fishing beginning January 15, 2005.
- Common transit routes (return trips) between Bering Sea snow (*opilio*) crab fishery grounds and Dutch Harbor Processors.
- Common transit routes (return trips) between Bering Sea snow (*opilio*) crab fishery grounds and Akutan Processors.

**DRAFT** Proposal for Selendang Ayu Oil Spill Water Quality Sampling, 1/11-1/17/05

- Convergence areas as observed by the vessel master.

**Sampling Platforms**

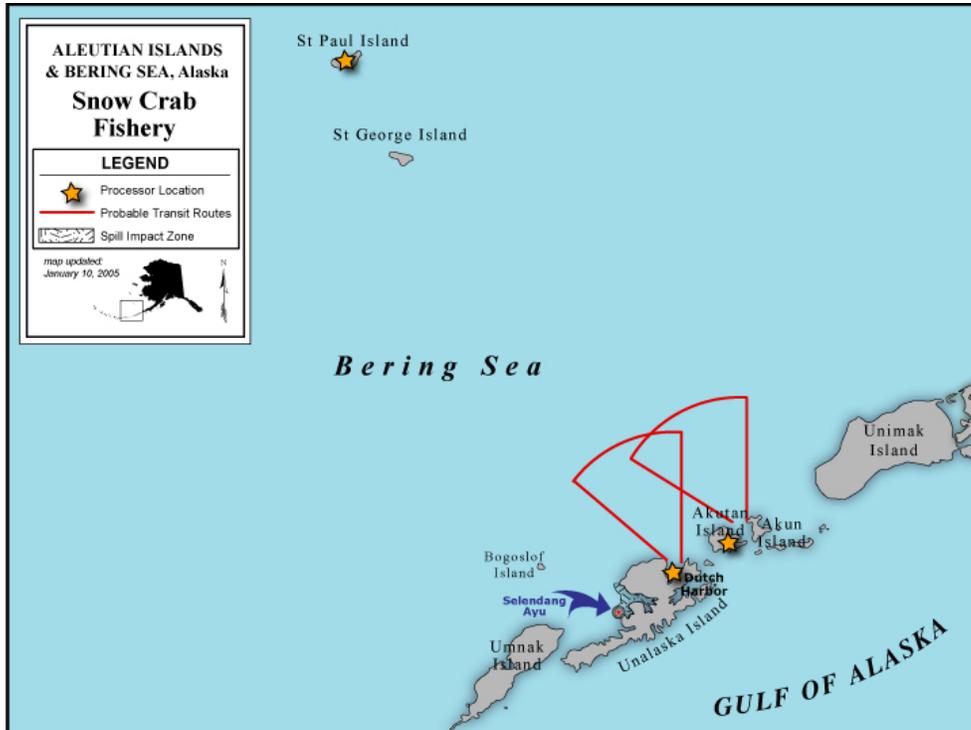
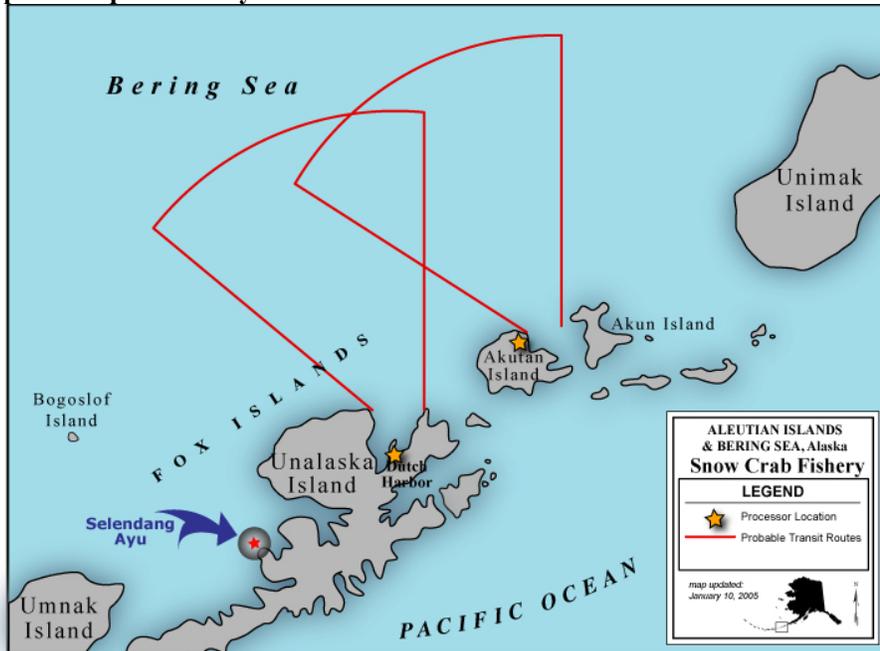
Two contracted vessels will be used as sampling platforms – the *Alaska Lady* and the *Exito*. One to two Sampling Technicians will be assigned to each vessel. Once appropriate staffing levels can be established, the sampling platforms will operate on a 24-hour basis.

**Proposed Schedule for 1/11/05 through 1/18/05**

<b>Start Date</b>	<b>Activities</b>	<b>Platform</b>
1/11/05	Training for sampling technicians and vessel crew on sampling protocol, net decontamination, and waste management	<i>Alaska Lady</i>
1/12/05	Survey offshore <i>opilio</i> crab vessel transit areas. Begin with western most snow crab transit route (310° True) from Cape Cheerful, sampling constantly using the sea strainer and regularly using the tow net for 30 min tows every 5 miles, at an approximate depth of 10 feet. The tow net sampling will begin 5 miles offshore and continue out to 50 nm offshore. Vessel will then run east until she is due north of Priest Rock and repeat the tow net procedure on the way back into Unalaska Bay.	<i>Alaska Lady</i>
1/12/05	Continued sampling in Unalaska study zone using baited pots (if Tanner season opener is not affected), sea-strainer and tow net in the Unalaska Fishing district to determine the occurrence of oil contamination there. If Tanner season is closed, vessel will be tasked with Akutan survey.	<i>Exito</i>
1/12/05 – 1/15/05	Survey <i>opilio</i> crab vessel transit areas near Akutan and conduct sampling in Akutan Bay and other nearshore areas using vessel sea strainer and tow net.	First available vessel

**DRAFT** Proposal for Selendang Ayu Oil Spill Water Quality Sampling, 1/11-1/17/05

**Maps of Proposed Study Areas**



**DRAFT** Proposal for Selendang Ayu Oil Spill Water Quality Sampling, 1/11-1/17/05

### **Actions to Take if There Are Indications of Contamination**

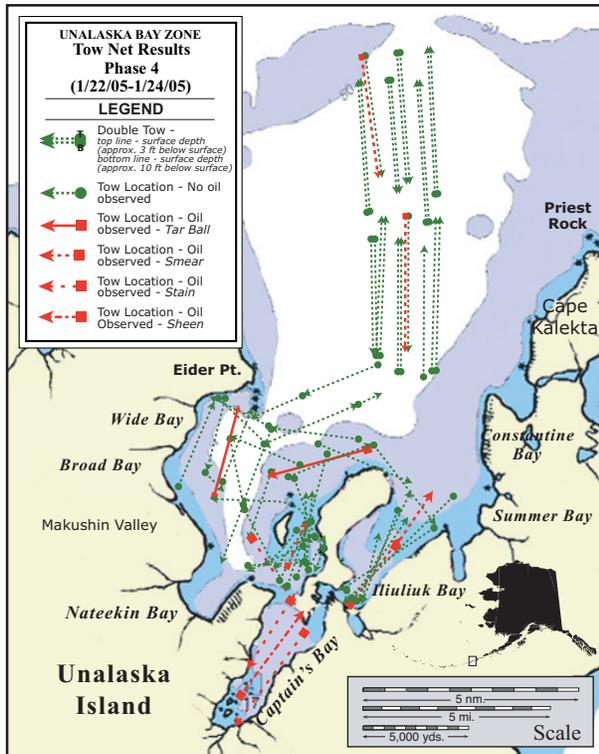
If the methods described above result in any positive indications that oil or contaminated seafood is found in the study area, extraordinary steps may be taken to ensure that no contaminated seafood is allowed to enter the market. Depending on the degree of contamination found, one or more of the following actions may be taken:

1. Enhanced seafood inspections by ADEC Division of Environmental Health seafood inspectors;
2. Alerts to fishermen, tenders and processors to take extra vigilance in inspecting seafood that they handle;
3. Alerts to fishermen, tenders and processors to take special precautions in convergence areas and other high-risk zones, such as temporarily ceasing seawater exchange.
4. Additional water quality sampling to determine the extent and degree of the contamination;
5. Designation of the area as a threatened water body<sup>1</sup>;
6. Partial or complete closure of the area to commercial fishing or the transportation of live crabs in tanks recirculating seawater;
7. Partial or complete closure of the area to crab processing.

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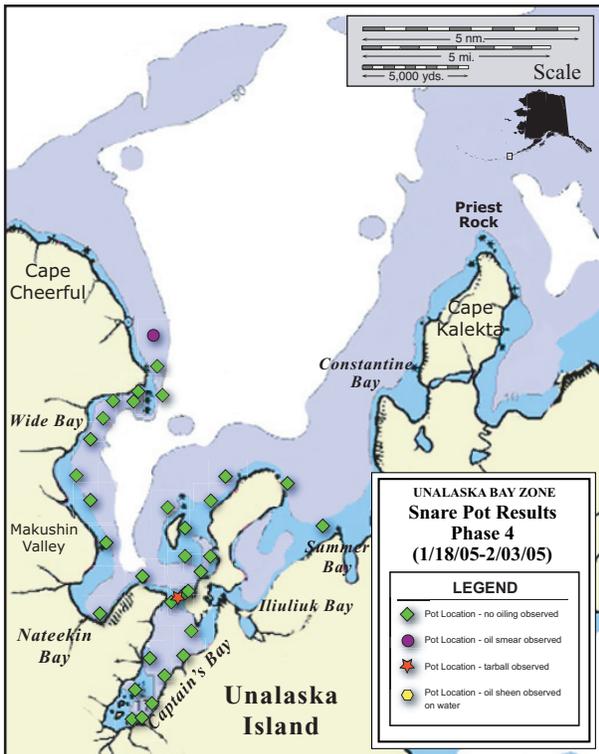
<sup>1</sup> 18 AAC 34.600(1).

## APPENDIX F: Examples of Results Maps from M/V Selendang Ayu Water Quality Sampling Program



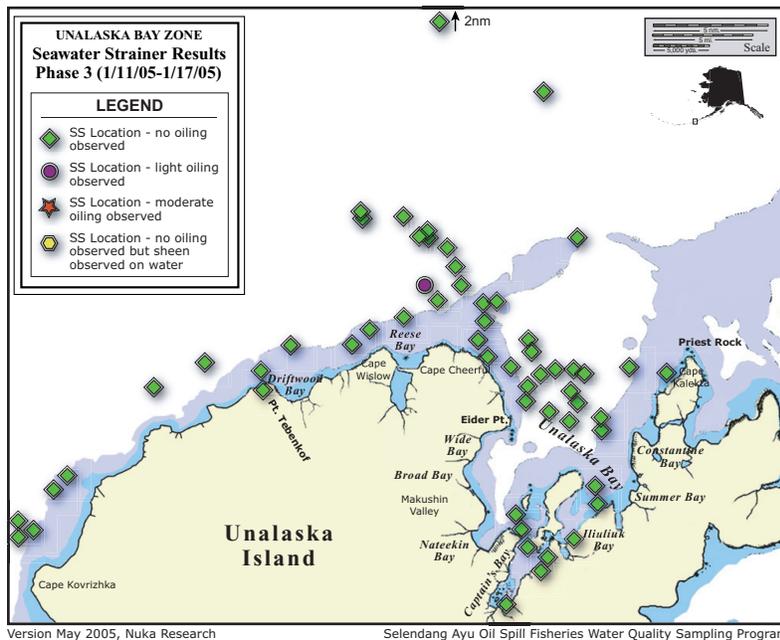
**Figure 10: Unalaska Bay Zone Tow Net Results Phase 4 (1/22/05- 1/24/05)**  
See Appendix A for data table.

Version May 2005, Nuka Research Selendang Ayu Oil Spill Fisheries Water Quality Sampling Program

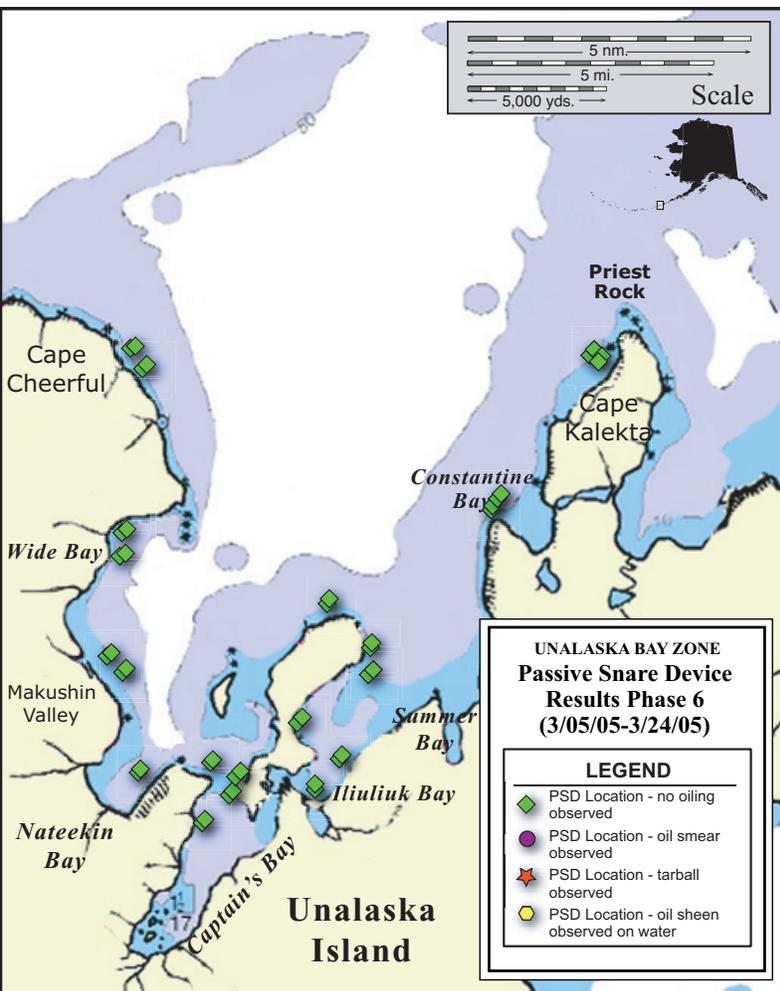


**Figure 18: Unalaska Bay Snare Pot Results Phase 4 (1/18/05- 2/3/05)**  
See Appendix C for data table.

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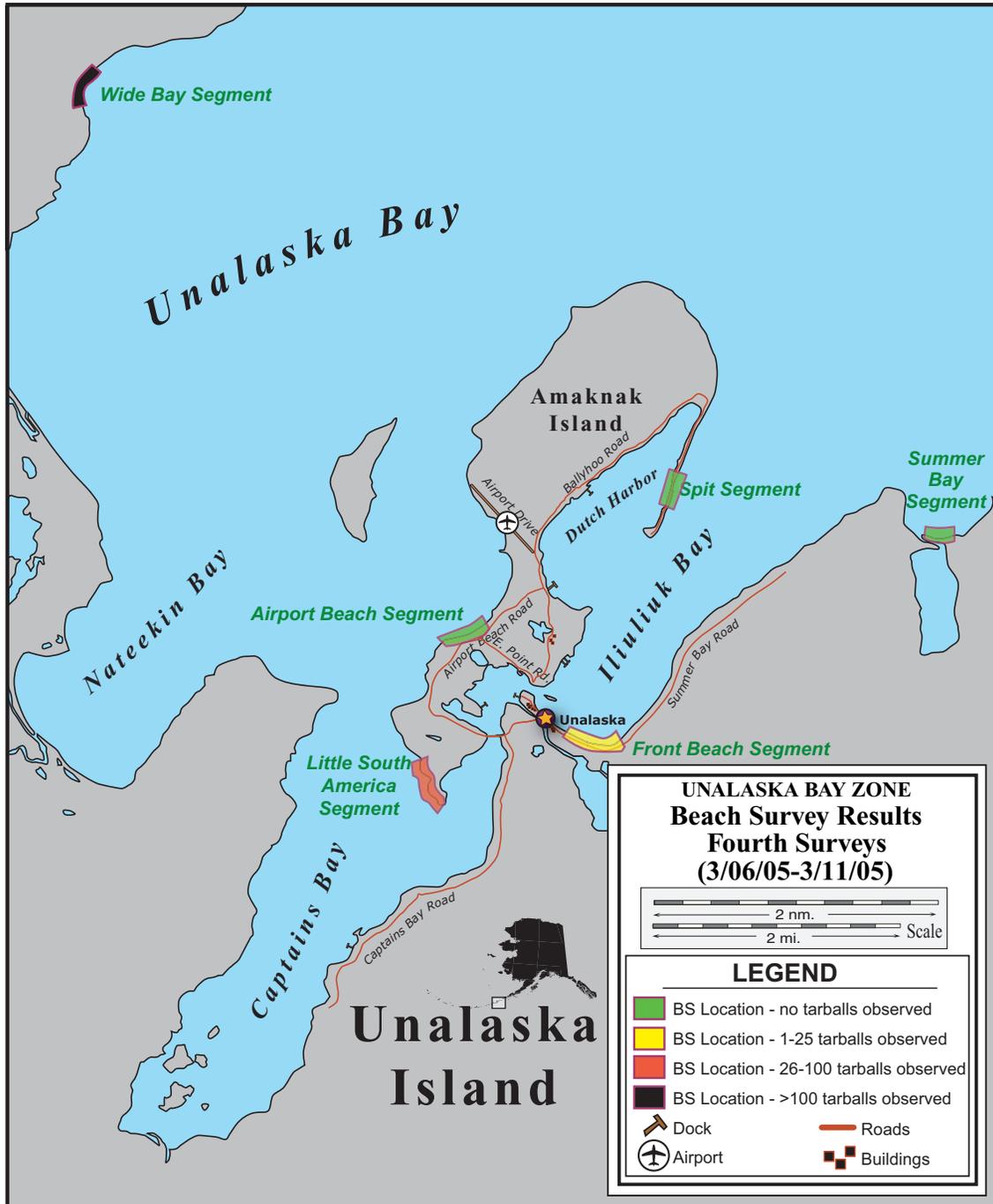


**Figure 20: Unalaska Bay Zone Seawater Strainer Results Phase 3 (1/11/05- 1/17/05)** See Appendix D for data table.



**Figure 24: Unalaska Bay Zone PSD Results Phase 6 (3/5/05- 3/24/05)** See Appendix F for data table.

**Figure 28: Unalaska Bay Zone Beach Survey Results from Fourth Surveys (3/06/05-3/11/05)**  
 See Appendix G for data table.



Version May 2005, Nuka Research Selendang Ayu Oil Spill Fisheries Water Quality Sampling Program

# APPENDIX G: ADFG Scientific Collection Permit for Fish

[IMPORT](#) [CLEAR](#) [More Info on this Form](#) [SAVE](#) [View Example](#) [PRINT](#)

CAUTION



## STATE OF ALASKA DEPARTMENT OF FISH AND GAME Fish Resource Permit Application — Email Form —

A **FISH RESOURCE PERMIT** is required to take, possess, hold alive, or tag FISH AND THEIR EGGS (except goldfish and decorative tropical fish) FOR SCIENTIFIC OR EDUCATIONAL PURPOSES.

(in order to use this form over again as a "blank form" first re-name and save this as a new document)

--	--

(Name of Applicant)

(Organization or School)

--

(type in complete mailing address including City, State, and Zip Code)

--	--	--

(your Telephone Number)

(Fax Number)

(Email Address)

--

(type in the name and address of the organization with which you are under contract)

**I am making application to capture fish of the following species and number for the specified disposition** (example: identify and release, measure and release, genetic sample and release, tag and release, sacrifice, transport, hold alive, etc.):

Species Common Name	Species Scientific Name	Life Stage	Number	Disposition*

\*For multiple sample locations give detail of species and number and disposition in your study plan

**I understand permits are only valid for dates within a calendar year; I am requesting this permit for the following period:** (a new application is required each year)

--	--	--

[View Example](#)

**Year:** (20\_\_)      **From:** (month and day)      **To:** (month and day)

**I wish to obtain the above fish [finfish, shellfish, amphibians] by means of:**

(Specify gear type(s): minnow traps, hoop traps, fyke nets, gillnets, dip nets, spat collectors, etc.)

**from the following location(s):**

(Specify location(s), i.e., X River at latitude/longitude, or ESE of Pt. Barrow, or on Kodiak Island, etc.)

[View Example](#)

The purpose of the activities for which a permit is being requested: (a brief purpose statement)

**NOTE:** A STUDY PLAN or RESEARCH PROPOSAL explaining the purpose and need, the objectives, and the procedures you will use must be included in/with this permit application:

Final disposition of collected specimens\* not to be released live at the site of capture will be:

\*(specimens may not be consumed, sold, traded, or bartered, or used in any commercial manner)

The following people will participate in field collections under terms of this requested permit:


(If applicant is representing a corporation or institution, a certification of affiliation may be required which must be notarized and attached to this application).

( completed application must be submitted to ):

**Email Address:**

Freshwater and estuarine environment collections (Division of Sport Fish):\n[tammy\\_davis@fishgame.state.ak.us](mailto:tammy_davis@fishgame.state.ak.us)

Marine environment collections (Division of Commercial Fisheries):\n[frpermits@fishgame.state.ak.us](mailto:frpermits@fishgame.state.ak.us)

or

**Mailing Address:**

Freshwater & estuarine environment collections:

**Alaska Department of Fish and Game  
Attn: Tammy Davis  
Division of Sport Fish  
P.O. Box 25526  
Juneau, AK 99802**

Marine environment collections and permits involving propagation. :

**Alaska Department of Fish and Game  
Division of Commercial Fisheries-Permits  
P.O. Box 25526  
Juneau, AK 99802-5526**

ADF&G declined participation, therefore example is not agency approved



**STATE OF ALASKA  
DEPARTMENT OF FISH AND GAME  
Fish Resource Permit Application  
— Email Form —**

A **FISH RESOURCE PERMIT** is required to take, possess, hold alive, or tag FISH AND THEIR EGGS (except goldfish and decorative tropical fish) FOR SCIENTIFIC OR EDUCATIONAL PURPOSES.

(in order to use this form over again as a "blank form" first re-name and save this as a new document)

John Kwietniak Tesoro Alaska Company

(Name of Applicant) (Organization or School)

54741 Tesoro Road Kenai, AK 99611

(type in complete mailing address including City, State, and Zip Code)

(907)907 776-3569 (907) 776-3812 jkwietniak@tesoropetroleum.com

(your Telephone Number) (Fax Number) (Email Address)

Tesoro Alaska Company (see address above)

(type in the name and address of the organization with which you are under contract)

**I am making application to capture fish of the following species and number for the specified disposition** (example: identify and release, measure and release, genetic sample and release, tag and release, sacrifice, transport, hold alive, etc.):

Species Common Name	Species Scientific Name	Life Stage	Number	Disposition*
Tanner Crab	Chionoecetes bairdi	late juvenile	50	inspect for oil and release
Halibut	Hippoglossus stenolepis	adult	50	inspect for oil and release
Black Cod	Anaplopoma fimbria	adult	100	inspect for oil and release

\*For multiple sample locations give detail of species and number and disposition in your study plan

**I understand permits are only valid for dates within a calendar year; I am requesting this permit for the following period: (a new application is required each year)**

2005 April 17 September 30

ADF&G declined participation, therefore example is not agency approved

**Year:** (20\_\_ )      **From:** (month and day)      **To:** (month and day)

**I wish to obtain the above fish [finfish, shellfish, amphibians] by means of:**

longline gear and commercial pots

(Specify gear type(s): minnow traps, hoop traps, fyke nets, gillnets, dip nets, spat collectors, etc.)

**from the following location(s):**

Kachemak Bay area surrounding Perl Island and Kennedy Entrance

(Specify location(s), i.e., X River at latitude/longitude, or ESE of Pt. Barrow, or on Kodiak Island, etc.)

Example

ADF&G declined participation, therefore example is not agency approved

The purpose of the activities for which a permit is being requested: (a brief purpose statement)

As a study to determine seafood safety after the T/V Cook Inlet oil spill

**NOTE:** A STUDY PLAN or RESEARCH PROPOSAL explaining the purpose and need, the objectives, and the procedures you will use must be included in/with this permit application:

Final disposition of collected specimens\* not to be released live at the site of capture will be:

Any individual specimens of species not released live will be returned to ocean dead.

\*(specimens may not be consumed, sold, traded, or bartered, or used in any commercial manner)

The following people will participate in field collections under terms of this requested permit:

Tim Robertson, Nuka Research	Mark Janes, Nuka Research	Elise DeCola, Nuka Research
Moe Richards, F/V Alaskan Lady	Ken Humlich, F/V Alaskan Lady	Steve Nowton, F/V Alaskan Lady

(If applicant is representing a corporation or institution, a certification of affiliation may be required which must be notarized and attached to this application).

( completed application must be submitted to ):

**Email Address:**

Freshwater and estuarine environment collections (Division of Sport Fish):  
[tammy\\_davis@fishgame.state.ak.us](mailto:tammy_davis@fishgame.state.ak.us)

Marine environment collections (Division of Commercial Fisheries):  
[frpermits@fishgame.state.ak.us](mailto:frpermits@fishgame.state.ak.us)

or

**Mailing Address:**

Freshwater & estuarine environment collections:

Alaska Department of Fish and Game  
 Attn: Tammy Davis  
 Division of Sport Fish  
 P.O. Box 25526  
 Juneau, AK 99802

Marine environment collections and permits involving propagation. :

Alaska Department of Fish and Game  
 Division of Commercial Fisheries-Permits  
 P.O. Box 25526  
 Juneau, AK 99802-5526

### **More Information on this Form**

*When do you need this form?*

When oil spill related activities include any taking of fish.

*Who fills out this form?*

An individual within the ICS who is responsible for activities involving the taking of fish.

*Who signs this form?*

No signature is required.

*Where does this form get delivered?*

See page 3 for delivery information.

*Other Comments*

An additional plan of operations or research plan needs to be submitted with this application.