United States Department of the Interior

OFFICE OF THE SOLICITOR
ALASKA REGION

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January 24, 2005

Via Facsimile (279-4239) and U.S. Mail

Herbert H. Ray, Jr., Esq.
Douglas R. Davis, Esq.
Keesal, Young & Logan
Suite 650
1029 West Third Avenue
Anchorage, AK 99501-1954

Re: M/V Selendang Ayu - Cooperative Reference Beach Study

Dear Sirs:

I am writing to follow up on our meetings of Monday, January 10 and Thursday, January 13, 2005, during which we discussed the performance of a cooperative reference beach study by the U.S. Fish and Wildlife Service (FWS) and the responsible parties (RPs) in connection with the evaluation of seabird mortality resulting from the M/V Selendang Ayu incident. I understand that the parties have reached agreement on the following terms of the cooperative reference beach study:

1. The parties have prepared three mutually acceptable protocols (Protocols). The Protocols are entitled: (1) Joint Protocol for Determining Levels of Bird Background Mortality, (2) Joint Protocol for Assessment of Bird Carcasses Lost to Scavengers and to Rewash, and (3) Joint Protocol for Determining Searcher Dedection [sic] Efficiency. Copies of the Protocols, which have been signed by Vernon Byrd and Dan Varoujean for the FWS and the RPs, respectively, are attached.

2. The RPs will pay all costs associated with performing the reference beach activities. Costs which will be paid directly by the RP include the costs of providing aerial and land based platforms for the performance of the work. Costs which shall be reimbursed by the RPs within thirty (30) days of receipt of appropriate cost documentation include travel and transportation costs of FWS personnel from their duty stations to Dutch Harbor, labor costs and per diem.

3. Data collected pursuant to and in accordance with the Protocols shall not be challenged by either party and shall be the only data used by either party for determining background mortality of seabirds in connection with releases of oil which have occurred to date, i.e., January 24, 2005, from the M/V Selendang Ayu. In the event that there are additional releases, however, the parties understand that it may be necessary or desirable to conduct additional reference beach studies.

If the RPs are in agreement with the terms of the cooperative reference beach study as described above, please sign the acknowledgment line below and return to me (my fax number is 271-4143) by the close of business on Wednesday, January 26, 2005. In addition, while I assume that Dan Varoujean is authorized by the RPs to sign documents, such as the Protocols, on the RPs' behalf in connection with this matter, I would appreciate it if you would confirm that my assumption is in fact correct.

I look forward to hearing from you.

Sincerely,

Lisa M. Toussaint

By signing on the line below, I acknowledge that the RPs are in agreement with the terms of the cooperative reference beach study as described herein.

_____ _____

Signature Date

Enclosures

cc: Jenifer Kohout, U.S. Fish & Wildlife Service
Deborah Rocque, U.S. Fish & Wildlife Service
Greg Siekaniec, U.S. Fish & Wildlife Service
Regina Belt, U.S. Department of Justice
Craig O'Connor, U.S. Department of Commerce
Alex Swiderski, State of Alaska

SELENDANG AYU INCIDENT

Prepared by Dan Varoujean
and Vernon Byrd

JOINT PROTOCOL FOR DETERMING LEVELS OF BIRD BACKGROUND MORTALITY

A study is needed to estimate background mortality by gathering data on the number of bird carcasses/unit length of various beaches located outside but near the affected coastline. The field work for this study will last up to 4 weeks. If there is another release of oil from the vessel this study of background mortality rates may need to be moved elsewhere or delayed.

A. Study Area

The study will be conducted along the north shore of Unalaska Island, southwest of the wreck site. In addition, the offshore aerial surveys being conducted by the FWS in this incident document the relative abundance of various species making up the "source" populations.

General study locations are:

1. Chernofski Harbor (CRN): This area faces in the same direction as the main bays in the oiled region and it contains protected, exposed (high impact), and catchment beaches.

2. Kashega Bay (KSB and BCK) is the other area that is similar to bays near the wreck site that would be used for this study.

3. At least six beaches will be selected in each geographic area (Chernofski and Kashega), two per beach type (protected, exposed, and catchment). Where possible long beaches, up to 2 km long, will be chosen. If the selected beaches turn out to be oiled they will be omitted from the sampling regime and new sites will be located. Oiled beaches are defined as having scattered, yet relatively numerous fresh tar balls or heavier oiling (i.e. not just several tar balls over a distance of 100m, or one or two spots of oil at the high strand line). The sample of beaches will include examples of substrates found typically on the north shore of Unalaska (e.g., gravel, sand, cobble and boulders or rock shelves).

B. Time Frame

1. Surveys will be conducted over a long enough time period to include storm conditions and seas similar to those that occurred during the early stages of the incident. In particular, the study period should include

several days following periods of at least 24 hours with strong onshore winds (i.e., > 35 kt and north, northeast, or northwest direction).

2. The study should be started as soon as possible, before the offshore bird community changes in species composition and abundance as spring approaches (typically early March). Each designated beach will be surveyed in the following pattern, weather permitting: Day 1, Day 2, Day 4 or 5, Day 6 or 7, then Day 8 and 9 and the cycle starts over. Not all beaches in the sample need to be surveyed on the same day, but each beach needs to have a similar cycle as that described above.

C. Survey Protocol/Documentation

1. Personnel: Search teams will each consist of three people with experience working in coastal Alaska with marine wildlife. A training session developed by Varoujean and Byrd will be held in Unalaska before the crews go to Chernofski and before the helicopter crew is deployed.

2. GPS coordinates will be recorded for end points of each survey beach in order to conduct replicate surveys per beach. Observers will search beaches walking abreast spaced to allow complete ground coverage (i.e., boulder beaches will require a closer distance among observers than gravel beaches). Helicopter-based crews will be dropped on one end of the beach and picked up on the other, based on suitable terrain for landing, allowing crew to remain in view of the pilot throughout the survey.

3. Observers will collect and record each carcass (defined as any part of a bird or mammal, e.g. feather pile, isolated wing, etc.) on a copy of the attached data form. Oiled birds that are collected will need to be picked up by people wearing plastic or latex gloves, placed in a paper bag, and placed in a plastic bag with an evidence tag between the two bags.

Beach Survey Data Form 2005	Date:	Surveyors:	Page:
	Time:		

Location:	Beach:	Length: Width:
Recent Wind Sp/Dir:	Beach type:	
Beach backing:	Beach orientation:	
Start Time: GPS:	Stop Time: GPS:	
Comments:		

Species	Cond-ition	Oil	Scav-enging	Breast	ID #	Notes

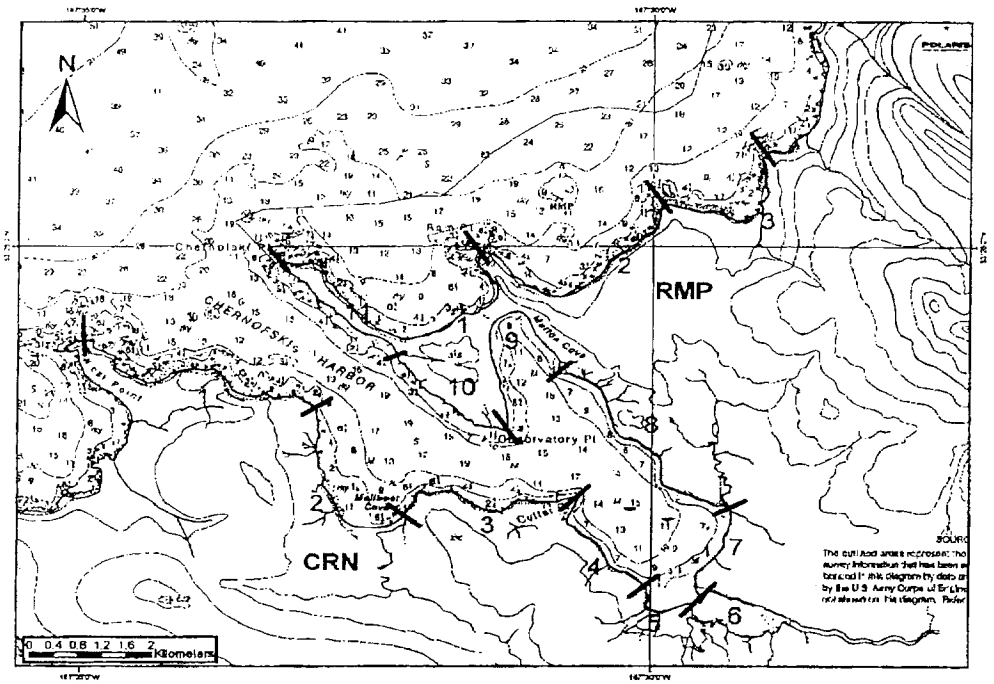
BEACH SURVEYS 2005 (back page)

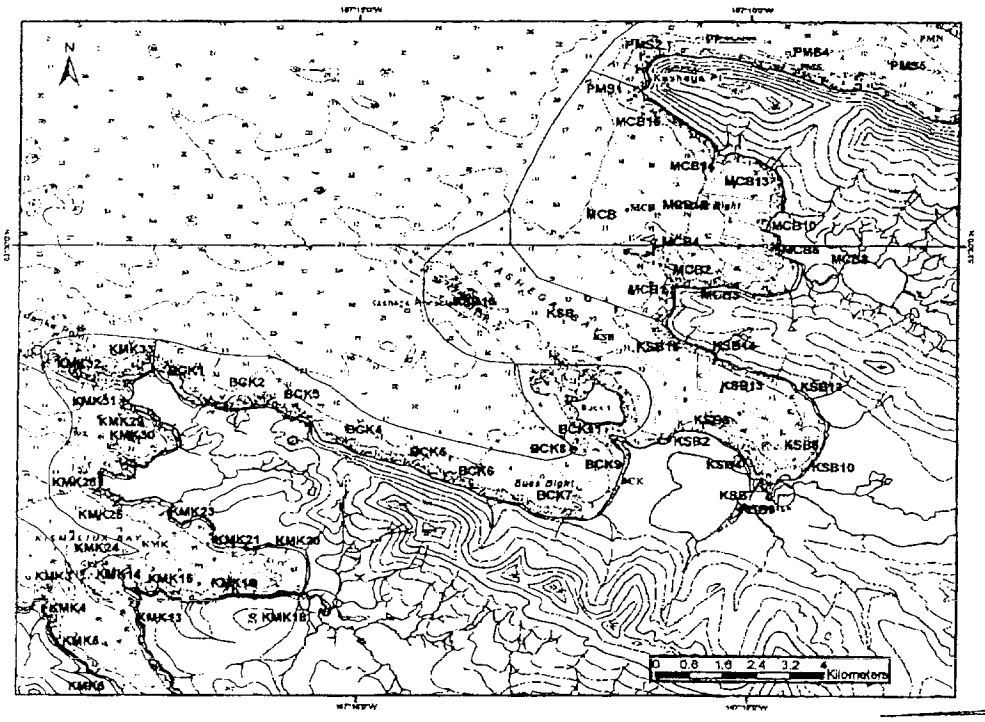
Condition codes: '**A**'= (possibly still damp, eyes still intact, dead less than a day). '**B**'= (somewhat desiccated, eyeballs present but sunken, perhaps partially buried by sand/debris, but body still limp and flexible). '**C**'=(desiccated, body rigid, eyeballs gone or sunken and completely hardened, parts missing). '**D**'= (completely desiccated, brittle, may be just parts like wings and breastbone only).	**Deliver to: U.S Fish and Wildlife Service representative in Environment Unit at Incident Command** **Degree of oiling codes**: **0**=no obvious oil on body. **1**=light spots of oil. **2**=moderate patches over body. **3**=heavily oiled all over.
Breast emaciation codes (for birds in condition A or B only): To assess whether birds were starving or not, feel the breast muscles. L=*L*ifeboat (normal): the breast is rounded like a lifeboat and you can barely feel the keel of the breastbone. R=*R*oof (slightly emaciated): the breast slopes evenly away from an obvious keel like the roof of a house. S=*S*ailboat (very emaciated): the breast is concave inwards from a sharply defined keel like the hull of a sailboat.	**Degree of scavenging codes**: **0**=no evidence of scavenging. **1**=light scavenging (skin broken, some guts removed). **2**=heavy scavenging (guts completely eviscerated, breast meat consumed). **3**=only parts left

Beach types: sandy, gravel, cobble, boulder, rock platform.
Type of habitat backing the beach: bluff/cliff, sand dunes, marsh, mud flat, forest, urban.

General Notes: For example, you could note how many eagles you see in the vicinity of your study beaches; note observations of actual predation; note tracks of mammalian predators on beaches (fox, mink, bears, etc.); how many live seabirds are seen on inshore waters; how many of those appear to be lethargic or sickly; evidence of other unusual mortality (e.g., fish, urchins or bivalves) or ocean conditions (plankton bloom, water temperatures, recent storms, etc.).

Maps of Kashega Bay and Chernofski Harbor





Signatures:

Daniel H. Varoujean for the Responsible Party — 18 Jan 2005 Date

G. Vernon Byrd for the U.S. Fish and Wildlife Service — 18 JAN 2005 Date

Prepared by Dan Varoujean
and Vernon Byrd

JOINT PROTOCOL FOR ASSESSMENT OF BIRD CARCASSES LOST TO SCAVENGERS AND TO REWASH

A carcass persistence study will be conducted to ascertain the numbers of carcasses lost to scavengers, as well as to rewash. The field portion of this test will last two to three weeks.

A. Study Area

Chernofski Harbor: An exposed beach (either CRN1 or RMP 2 or 11 (see attached map) and a more protected beach (e.g. inside Chernofski Harbor) will be used for this study to evaluate both rewash and scavenging, the two sources of carcass disappearence. The ranch house in this area provides a land base so that observers can check the loss rate of carcasses daily, barring very high winds or deep snow.

Beach Selection: After crews have evaluated the universe of beaches that can be accessed regularly, at least two beaches (one exposed and one protected) will be selected for study that have substrates including those present in the oiled area.

B. Carcass Placement

1. Bird carcasses, marked with metal tags on both wings, will be placed "randomly" along the test beaches (e.g., CRN1, RMP1, or RMP2 for exposed). An example to illustrate carcass deployments follows: choose CRN1 and suppose the search starts from the southeast end (see figures below). A study area about 2 km long would be selected on the study beach by drawing a random number to determine where to start the 2 km stretch. From the start point, carcasses would be deployed at a rate of up to 5 birds per 100 m. The first carcass would be deployed at the start point and subsequent carcasses would be distributed at random intervals over the 2 km of beach. To evaluate rewash as well as scavenging, carcasses would be randomly placed either just above the high tide line or near the high-high tide line. A coin would be tossed at each location to determine whether a carcass will be placed "low" or "high" on the beach. The exact spot on the beach would be determined by where a carcass pitched over a shoulder lands.

2. In order to avoid scavengers cuing in on human presence, carcasses will be deployed as close to darkness as possible while still allowing the crew to return safely to the camp.

3. A small numbered piece of wood will be placed under each carcass in order to discern between a carcass floating away from scavenger removal. For instance, if the carcass is gone but the wood is present near original location = scavenger removal of carcass; if both are gone, then observers will look for signs of rewash.

4. Many of the carcasses being retrieved in the oiled area are heavily oiled. To mimic this condition, at least half the unoiled carcasses deployed will be placed so that as little light plumage is showing as possible (e.g., for murres place some belly down).

C. Number of Carcasses/Species

1. Deploy at least 25 unoiled carcasses, including (if available) about 50% smaller species like auklets and 50% larger carcasses like murres or sea ducks.

2. Carcasses will be scattered at a rate of 3-5 per /100 m (approximately within the range of what might be expected in the spill zone) with coverage that spans the width of the beach at high tide.

3. The same or similar species to those being found on the north shore of Unalaska will be used in the persistence study.

4. Carcasses can be from frozen specimens but must be relatively fresh; if too decomposed, scavengers may avoid

D. Search Protocol/Documentation

1. Attempt to survey the carcass persistence beaches once per day.

2. Use a GPS to record the Long/Lat of placement and subsequent locations of carcasses (see attached form)

3. Describe and photograph carcasses on each visit after the initial placement (see attached form for use during each visit)

Beach Survey **Data Form 2005** ***CARCASS PERSISTENCE***	Date: Time:	Surveyors:	Page:

Location:	Beach:	Length: Width:
Recent Wind Sp/Dir:	Beach type:	
Beach backing:	Beach orientation:	
Start Time: GPS:	Stop Time: GPS:	
Comments:		

Species	ID	Date	Time	GPS	Cond.[a]	Pos.[b]	Comments

[a]Codes: In tact (I), body cavity open (C), breast muscle gone but skeleton mostly in tact (B), carcass dismembered, only parts remain (D), Other (0) –describe in comments.

Signatures:

Daniel H. Varoujean for the Responsible Party — Date: 18 Jan 05

G. Vernon Byrd for the U.S. Fish and Wildlife Service — Date: 18 JAN 05

Prepared by Dan Varoujean
and Vernon Byrd

JOINT PROTOCOL FOR DETERMING SEARCHER DEDECTION EFFICIENCY

The objective of this project is to establish the number of carcasses not detected during beach surveys. Searchers will be asked to find carcasses placed along a delineated stretch of beach within a specified time period. No more than 3-4 days should be needed to carryout the tests in the field.

A. Beach Selection:

1. Stretches of unoiled exposed and protected beaches that contain several substrates (e.g. cobble, gravel, sand, or boulders) would be selected.

2. One beach each from the protected and exposed groups would be chosen subjectively to assure multiple substrates are included (see above).

B. Personnel

1. Use two, three person teams.

C. Species

1. Use carcasses both whole and scavenged found during the background mortality study or carcasses for the persistence study for these tests.

D. Placement of Carcasses

1. One investigator will place birds to reflect the observed distribution during surveys. For instance, space the birds out irregularly along the length of the beach, and vary the placement from just above high tide to the high-high tide line including within the wrack line to reflect a typically random and naturally-strewn distribution.

2. Approximately 1-5 carcass/100 m will be deployed over a 500 m length of beach (but the density will not be known to the search teams).

3. Carcasses or parts will be placed in sandy areas in such a way that tracks do not lead observers to carcasses (e.g., carcasses could be thrown a distance from the track line of the investigator through sandy stretches.

E. Beach Searches

1. After carcasses have been deployed, one team of three observers, having not observed the placement of carcasses, will search the beach and each carcass will be uniquely marked in a subtle way (GPS, small tag under the carcass).

2. A second team of three observers, having not observed the first team, will then search the same beach and mark each carcass as well. Each team will search at rates typically used during the background mortality beach searches (e.g., 0.5 h/km).

3. Following the work of the second team, both teams will come back down the beach and record data for (and recover) each carcass as follows: Number seen by team one only, Number seen by team two only, Number seen by both teams, and Number seen by neither team. These data will be used to calculate detection probability.

Signatures:

Daniel H. Varoujean for the Responsible Party — 18 Jan 05 Date

G. Vernon Byrd for the U.S. Fish and Wildlife Service — 18 JAN 05 Date