[Shoreline evaluations, 1990].

KO7-03 – KO9-15

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SHORELINE EVALUATION

SEGMENT ST/ K0703-LC-005 SUBDIVISION A (1 OF 1) DATE 4/4/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Sensitive estuary (AA): Stream mouth - fry outmigration (1A) - 3/1 to 5/15; Stream mouth - spawning (1B) - 7/10 to 8/31.

SUBDIVISION ECOLOGICAL CONSTRAINTS: Bald eagles observed in area - but no nest sitings.

SHPO SIGNATURE: [Signature] DATE: April 11, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 7053 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:
X ___ No Treatment Recommended ______ Snare/Absorbent Booms
_____ Treatment Recommended ______ Oil Snares (pom poms)
_____ Manual Pickup ______ Absorbents (pads, rolls, etc)
_____ Bioremediation ______ Spot Washing: ______ Wands
_____ Tarmat: ______ Breakup ______ Beach Cleaner
_____ Removal ______ Other (see comments)

COMMENTS: No treatment recommended. No oil observed.

TAG COMMENTS: ____________________________

TAG APPROVAL DATE: 4/11/90
ADEC John Bauer
EXXON Andy Tom
NOAA Ray Assi
USCG G.A. Retter
SEGMENT ST1 K-07-03 LC-05 SUBDIVISION: K-7-3 LC-5A DATE 9-3-90

NAME D.D. Hansen Jr., GM3, LRCP SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No oil sighted.

ADEC

NAME Francine J Bennie SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No oil observed, except for 1 splatter on a drift log of supratidal.

LAND MANAGER

NAME John P. Hardister SIGNATURE

☐ NO TREATMENT RECOMMENDED

☐ TREATMENT SUGGESTED

COMMENTS

No oil observed.
SHORELINE OILING SUMMARY

OG: Exxon  Action: USCG  Haven:  SEGMENT ST:  K7-3-10 3
BIO: Exxon  Radi:  LAND REP: V5-15  Ho! di.. SUBDIVISION: K7-3-15 SA
EXXON: Exxon  ADEC: Benni...  TIME:  2:30 10.6  0:00
TEAM NO.: 2 0  TIDE LEVEL:  + 5.10  0:00  DATE:  4/3/90
ST. SUBDIVISION LENGTH: 705  m 703  SUN  CLOUDS  FOG  RAIN  SNOW
PLAIDS DESCRIPTION:  N  GRASS  FOREST  ROCK
SURVEYED FROM:  N  FOOT  BOAT  HELO  WORKING DIRECTION:  N 10  S
SURFACE SEDIMENTS:  F  OIL  ALGAE  %  P  %  G  %  S  %  M  %  V  %  O  %
SLOPE:  Land  1%  Hang  %  Vert  %  WAVE EXPOSURE:  O  LOW  M  MED  H  HIGH
OIL CATEGORY LENGTH:  W  0  m  M  0  m N  0  m V  0  m SL  0  m

SURFACE OIL

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<th>DISTRIBUTION</th>
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PAVEMENT:  H  F  S  N/A sq. m by N/A cm

PATTIES / TARBALLS:  N/A  BAGS

NEAR SHORE SHEEN?:  NO  BR  RW  SL  TL

OILED DEBRIS AMOUNT

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<tr>
<th>OILED DEBRIS</th>
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Debris COLLECTED:

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Photographs:

Roll No.: 20 3  Frames: 2 3  6

SUBSURFACE OIL

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<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (CM-CM)</th>
<th>BELOW OIL / FILM COLOR</th>
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PREVIOUS OILED:  C  P  G  S  P  S

SUBSURFACE SEDIMENTS

COMMENTS: One oil stain (10 cm x 3 cm) observed on drift log in SV at extreme N end of segment. No other oil observed. Many pits (approx 60) up to 25-40 cm in depth were dry, with no subsurface oil observed. High energy shoreline for entire segment, w/ steep and largest storm berm.

Page 1 of 2

Reviewed: BAT  Date: 4/3/90
### Subsurface Oil (Continued)

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**Comments**

Reviewed by [Signature] Date 4 Apr 90
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REVIEWED: BAT  DATE: 4 Apr 90
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**Comments**

Reviewed: [Signature]  Date: 4/Apr/93
SEGMENT ST/K7-3-1C-5
SUBDIVISION K7-3-1C-5A
DATE 4/3/90

CHECKLIST

Narrow
Approx. Scale
Ost/Sub Snry
Width
Length
% Cover
Substrate Character
SSL
Profile Location(s)
Photo(s)
PI Location(s)
Location(s)

LElEND

1 \[ \text{No Subsurf. Oil} \]

2 \[ \text{Subsurf. Oil} \]

Continuous Distribution
Broken Distribution
Pastry Distribution
Splashed Distribution

Oil Vegetation

A

A-A' = 60m

Substantial driftwood and debris accumulation at and above SSL on top of spit - far entire segment length

Oil Chart Length (m): AP 0 PO 0 CV 0 CT 0 ST 0 MS 0 T 0 TB 0 FL 0 NO 7053 7053
SHORELINE ECOLOGICAL SUMMARY

Segment ST/K7-3
Subdivision LC-05A
Date (mo./day/yr) 4-3-90

Time (24 hr.) 14:35
Biologist H. Davis

Substrate type and % of segments:
(1) Bedrock  (2) Boulder  (3) Cobble  (4) Pebble  (5) Sand  (6) Silt

(B) Overall % cover of biota (% of segment): Dense  Moderate  Low 100% (<1%)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

BARNACLES

Dense  Moderate  Sparse  Rare

MYTILUS

Dense  Moderate  Sparse  Rare

OSTRACODS

Dense  Moderate  Sparse  Rare

FUCUS

Dense  Moderate  Sparse  Rare

Wildlife Observations/General Comments: K7-03: LC-05A is the ocean side of a cobble/pebble spit separating natural lagoon from the Pacific Ocean. It is a high energy beach with a lot of rocks washed up above the high tide line by storms. Harbor seals were seen in the drift. There were no populations of barnacles, mytilus, ostracods or fucus. No baby seals were seen, but several (7) harbor seals and 2 harbor seals were observed in the area. One harbor seal was found on the up beach bluff area above the storm water. Three (2-3) groups of harbor seals were observed in the area. (10) Cassin's auk, (40) common murre, (50) Pigeon guillemot, (20) Steller's eider, (50) Rock sandpiper, (7) common eider, (1) snow bunting, (6) black turnstone. 3 sea otters were observed feeding on seaweed. A large school of Steller's eider were observed off shore of LC-05A. 60-70 harbor seals were observed off shore of LC-05A near log at Steller's eider just to the north of LC-05A.

Ecological Considerations:
(L13, 14) The important on the north side of LC-05A is an extensive tidal flat area for many species of birds. Page is full and not in the area. No mudflats observed. (20) Common murre, (40) Cassin's auk, (50) Pigeon guillemot, (20) Steller's eider, (50) Rock sandpiper, (7) common eider, (1) snow bunting, (6) black turnstone. 3 sea otters were observed feeding on seaweed. A large school of Steller's eider were observed off shore of LC-05A. 60-70 harbor seals were observed off shore of LC-05A near log at Steller's eider just to the north of LC-05A.
SHORELINE EVALUATION

SEGMENT ST/ K07-04-LB-001 SUBDIVISION A (1 OF 1) DATE 4/3/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 4/23/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 8721 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth _____

RECOMMENDATIONS:
X No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat: Breakup
_____ Removal

COMMENTS:

____________________________________________

TAG COMMENTS:

____________________________________________

TAG APPROVAL DATE: 4/21/90
ADEC Art Weiner Art Linder
EXXON
NOAA
USCG [Signatures] DATE: 4-27-90
SEGMENT ST:  K7-4-48-1  SUBDIVISION:  K7-4-48-1A  DATE:  4-3-76

USCG NAME:  D. D. Hauen, Jr.  GM3  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

Comments:
No oil sighted

ADEC NAME:  Francis T. Benton  SIGNATURE:  [Signature]

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

Comments:
Walked approximately 5 miles of segment L8 001, along inside of spit along Altitak lagoon.  No oil observed, surface o' subsurf

LAND MANAGER NAME:  John P. Hardesty  SIGNATURE:  [Signature]  USFWS

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

Comments:
No oil observed
SHORELINE OILING SUMMARY

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<tr>
<th>Location</th>
<th>Action</th>
<th>Segment ST/</th>
<th>Team No.:</th>
<th>Date</th>
<th>Time</th>
<th>Tide Level:</th>
<th>Est. Subdivision Length:</th>
<th>Uplands Description:</th>
<th>Surveyed From:</th>
<th>Working Direction:</th>
<th>Slope:</th>
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<td></td>
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<td>K7-4-48-1</td>
<td>20</td>
<td>4/3</td>
<td>14:25</td>
<td>-5.5</td>
<td>7500 m</td>
<td>Grass</td>
<td>Foot</td>
<td>N to S</td>
<td>Long 100%</td>
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**SURFACE OIL**

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<th>Character</th>
<th>Distribution</th>
<th>Oil/Film Color</th>
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<td>Coat</td>
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<tr>
<td>Stain</td>
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<td>Mousse</td>
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**SUBSURFACE OIL**

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<th>Oiled Interval (cm-cm)</th>
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</table>

**Comments:** No oil observed in this segment. Entire subdivision was surveyed on foot.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST/K07-04**  
**Subdivision LE-01 A**  
**Date (mo/day/yr) 4-3-90**

**Time (24 hr) 14:35**  
**Biolologist H. Davis**

(A) Substrate type and % of segments:

1. Bedrock  
2. Boulder 5%  
3. Cobble 20%  
4. Pebble 25%  
5. Sand 15%  
6. Silt 25%

(B) Overall % of cover biota (% of segment):

- Dense 10%
- Moderate 60%
- Low 30% (40%)

(C) Density, substrate preference (by number from A, above), and vertical zonation of major taxa:

- **Photographs:** Roll No. ST-20-3  
- Frames 4, 5

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Wildlife Observations/General Comments:

- Adult area of lagoon along side the barrier beach is a
  shallow mudflats area with scattered Seagrass.  Kittiwakes (L.)  
  feeding in the area.  There was found in scattered but dense points in the intertidal.  

- There were also dense patches of kelp with scattered kelp beds.  Mytilus were also
  patches, but dense.  Densities of barnacle and oyster were found along the shore.  
  Juvenile barnacles and oysters were found along the barrier beach. X-rays were evidence running across the staghorn.

Ecological Considerations:

- This is an estuary area separated from the ocean by a Barrie beach.  Used by waterfowl for nesting and breeding.
- Turtles feed and rest in the area.  Seal, naval and Sea Turtle Winter in this estuary.
LC-4

K7-4-LB-1A

Subdivision Boundary

XXX Wide
/// Medium
--- Narrow
TTTT Very Light
.

0000 No Oil

XXX Wide
/// Medium
--- Narrow
TTTT Very Light
.

0000 No Oil

K7-4-LB-1A

Map Key: GNA-158a
Name: Acton
Date: 4-3-90

Date Entered:
SHORELINE EVALUATION

SEGMENT ST/K07-13-TI-001 SUBDIVISION A (1 OF 1) DATE 5/31/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
30, 3Q Harbor seal and sea lion molting (8/15 to 9/15)

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOCLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: CHARLES J. HINNERY DATE: JUNE 19, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 9324 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
Treatment Recommended
Manual Pickup
Bioremediation
Tarmat Removal

Snare/Absorbent Booms
Oil Snares (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 6/16/90
ADEC
EXXON
NOAA
USCG
KODIAK ECOLOGICAL CONSTRAINTS

1A
Salmon stream mouth - fry outmigration (4/15 to 7/31)

1B
Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Imipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C
Salmon fry nursery area (4/21 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Imipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D
Kotze Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1E
Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Imipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1F
 Gill net area

1G
Purse seine area

Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1H
Purse seine hook-off

1I
Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (11) restrict boat operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Imipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

2M
Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncold intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Imipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 466-7471

3N, 3P
Harbor seal and sea lion pupping (6/10 to 7/1)

3O, 3Q
Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Imipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31) Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R
Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

5S
Shorebird/waterbird concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377
ADF&G Tom Rhoty 267-2208

5T
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

6U
Recreation:

Tent sites (8/1 to 9/15)
Anchorage (8/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)

6V
Special use destination

6W
Subsistence area: Salmon harvesting (8/1 to 9/30)

7J
Finfish harvesting

7N
Deer harvesting (8/1 to 7)

7P
Invertebrate harvesting

7Q
Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Imipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  K-713/TV-1  SUBDIVISION: A  DATE

NAME Tom Callahan  SIGNATURE  Tom Callahan  6/1/90

☑ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

Only two very weathered tarballs observed. A sample of each was taken for fingerprinting analysis in NOAA Lab in Anchorage.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

ADEC

NAME Jeff Barchart  SIGNATURE  Jeff Barchart

COMMENTS

Agree with land manager comments. No Treatment recommended.

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

LAND MANAGER

NAME Mike DeWing  SIGNATURE  Michael DeWing

COMMENTS

This segment is mostly within a legislatively designated critical habitat area. Mostly a high wave energy beach area which has deposited bars of pebbles, cobble and gravel during fair weather. Possibly containing previously deposited oil. Only a few oil and tar balls were observed during survey.
SHORELINE OILING SUMMARY

OG: J. Springfield
BIO: D. Lohse
USCG: A. Smith
SUBDIVISION: USCG (1 OF 1)
EXxon: T. Callahan
SEGMENT: Fish & Game: J. Backhart
TEAM NO. 19
TIME: 11:20 a.m.
DATE: 05/13/90

EST. SUBDIVISION LENGTH: 18,600 m
UPLANDS DESCRIPTION: Grass, Forest, Rock, Grass, Forest, Rock, Grass, Forest, Rock.
SURVEYED FROM: Foot, Boat, Helo
WORKING DIRECTION: W to E

SURFACE SEDIMENTS: R 5% B 5% C 5% P 15% G 30% S 50% M 5% V 0%
SLOPE: Long 100% Hang 50% Ven 50% WAVE EXPOSURE: Low 5 Med 5 High 0
OIL CATEGORY LENGTH: W____ m M____ m N____ m

SURFACE OIL

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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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PAVEMENT H F S____sq. m by____cm
PATTIES/TARBALLS_________ BAGS
NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT
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DID YOU COLLECT DEBRIS?
YES □ NO X

Photographs:
Roll No. ________
Frames ________

SUBSURFACE OIL

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COMMENTS: Most of segment consists of sand spit with stationary back-beach dunes. Extreme northwest end has incompetent mudstone cliffs. Southeast end of segment was not surveyed due to the presence of seals and bad weather.
K0710-T1001

OILING
H = Heavy
M = Moderate
L = Light
VL = Very Light
N = None
NS = Not Surveyed

Distance in Meters

NESC Sep/Oct 1980 Survey

Log Map

OIL

Gull resting area

Pod of seals

Sea birds

Dead turtle

Not surveyed

Entire Segment
SHORELINE ECOLOGICAL SUMMARY

Segment ST / Subdivision A

Date (mo / day / yr) 5.31.40

Time (24 hr) 11:00

Biologist David Lehne

(A) Substrate type and % of segments:
   (1) Bedrock (2) Boulder (3) Cobble (4) Pebble (5) Sand (6) Silt

(B) Overall % cover of biota (% of segment): Dense Moderate Low

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

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Wildlife Observations/ General Comments:

See page 2

Ecological Considerations:

3) NO - At northwest end of segment several solitary seals observed in water. Farther east a pod of 30 seals was observed. In the small lagoon in the center of the segment 2-3 pods of seals were observed hauled out on the beach.
Biologist: David Lehr

Wildlife Observations/General Comments

1. One immature bald eagle, 26 terns, and innumerable gulls were spotted in area.

2. One complete baleen whale and the remains of 2 deer and 2 seals were found on beach.

3. Intertidal region along segment was sandy beach with scattered pebbles & boulders, cobble, and pebbles. In several locations, there were 2 beach barns. At one site the area between the barns was low enough to be covered with water, and the scattered cobble and pebbles here had some Enteromorpha on them. Other than this the intertidal was devoid of organisms.
Not surveyed

XXX Wide
/// Medium
---- Narrow
TTTT Very Light

Map Key: GOA-315E

Name: James Spring
Date: 5/31/90
Data Entered:

ADEC Segment Length: 23866m
XXX Wide
//// Medium
----- Narrow
TTTT Very Light

K#713-TI-1-A

Map Key: GOA-315b
Name: James Springer
Date: 5/31/90
Data Entered:

ADEC Segment Length: 23866m

Not surveyed

60A  
315E
SHORELINE EVALUATION

SEGMENT ST/K08-04-UB-03 SUBDIVISION A (1 OF 1) DATE 4/9/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Harbor seal and sea lion pupping (3N, 3P) - 5/10 to 6/30 and molting (30, 3Q) - 8/15 to 9/15.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid disturbance/damage to unoiled biota and substrate. See attached Ecological Constraint Sheet.

SHPO SIGNATURE: [Signature] DATE: 4/17/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0 m: No Oil 15922 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ___

RECOMMENDATIONS:
X No Treatment Recommended
___ Treatment Recommended
___ Manual Pickup
___ Bioremediation
___ Tarmat: Breakup
___ Removal

___ Snare/Absorbent Booms
___ Oil Snare (pom poms)
___ Absorbents (pads, rolls, etc)
___ Spot Washing: Wands
___ Beach Cleaner
___ Other (see comments)

COMMENTS:

TAG COMMENTS:

TAG APPROVAL DATE: 4/16/90
ADEC [Signature] DATE: 4-20-90
EXXON [Signature]
NOAA [Signature]
USCG [Signature]
NO TREATMENT RECOMMENDED

Comments:
No oil sighted

ADEC
NAME: Franklin J. Bermis
SIGNATURE:

NO TREATMENT RECOMMENDED

Comments:
Inspected entire length of accessible beach in each of our 4 setdowns in north Ugak Bay. No oil observed.

LAND MANAGER
NAME: Ray Burger
SIGNATURE:

NO TREATMENT RECOMMENDED

Comments:
Four pocket beaches on segment assessed - no oil
All four are high energy beaches, landable by small craft
Very campable
Deer & eagles abound.
Three-wheeler trail accesses beach #4
**SHORELINE OILING SUMMARY**

**OG Acten** USCG Hker ________ **SEGMENT ST/** K8-4-U5-3

**PRIO Davis LAND REP DNR** ____________ **SUBDIVISION** K8-4-V8-2A

**ONXON Avery ADECO Rent**

**SUN AM NO.:** 100
**TIDE LEVEL:** +0.5 to +6
**DATE:** 4/28/90

**EST. SUBDIVISION LENGTH:** 15495 m

**UPLANDS DESCRIPTION:** Grass Forest Rock

**SURVEYED FROM:** Foot Boat Helo

**WORKING DIRECTION:** NW to SE

**SURFACE SEDIMENTS:** R 30 % B 30 % C 10 % P 10 % G 10 % S 10 % M 0 % V 0 %

**SLOPE:** Lang 33 % Hang 23 % Vert 33 %

**WAVE EXPOSURE:** Low Med High

**OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 0 m NO 15495 m**

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**SURFACE OIL**

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<th>Character</th>
<th>Distribution</th>
<th>Oil/Film Color</th>
<th>Impacted Zones</th>
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**PAVEMENT:** H F S 0 sq. m by 0 cm

**PATTIES/TARBALLS:** 0 BAGS

**NEAR SHORE SHEEN?** No BR RW SL TL

**OILED DEBRIS AMOUNT**

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<th>Logs</th>
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<th>Trash</th>
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Photographs:

**Roll No.:** ST-30-3
**Frames:** 27-34

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**SUBSURFACE OIL**

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA</th>
<th>SUBSURFACE SEDIMENTS</th>
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**COMMENTS:** Surveyed 4 sections on foot (see map). Remainder of segment was surveyed by here at approx 30kts and 30m altitude due to steep and vertical headland and cliff and sounding tide (4000 m approx). No oil was observed in areas surveyed on foot. No oil was observed in areas surveyed by here, although the limitations of spotting oil by here are obvious. A foot survey of these areas would be required to make a more conclusive judgment regarding the presence of oil.

**REVIEWED:** BOAT DATE: 9 Apr 94

Page 1 of 2
### Subsurface Oil (Continued)

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**Comments**
SEGMENT S7/K2-1
SUBDIVISION K8/K2-3A
DATE 4/3/90

CHECKLIST
- Known
- Approx. Scale
- Subdivision Boundary
- Oil Only
- Width
- Length
- % Cover
- Substrate Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 A
Plt - No Subsurface Oil

2 A
Plt - Subsurface Oil

CT/C Continuous Distribution

CT/S Broken Distribution

CT/P Patchy Distribution

CT/S Splashed Distribution

Oiled Vegetation

- Photo location, direction, and number

Oil Character Length (m): AP . . . PO . . . CV . . . CT . . . ST . . . MS . . . PT . . . TB . . . FL . . . NO . . .
SEGMENT ST/93-1990-3
SUBDIVISION KS-44-03-A

DATE 4/8/90

CHECKLIST

N Arrow
Approx. Scale
Seg/Sub Boundary
Oil Disl
Wash
Length
% Cover
Substrate Character
Est. HT/TL/HL
SSL
Profile Location(s)
Profile(s)
Plot Location(s)
Photo Location(s)

LEGEND

1 A
Pit - No Subsurface Oil

2 A
Pit - Subsurface Oil

Continuous Distribution
Broken Distribution

Oiled Vegetation

Photo location, direction, and member

Oil Character Length (m): AP, PO, CV, CT, ST, MS, PT, TB, FL, NO, AGG

Approx. Scale
1 cm = 100 m
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/K08-04  
Subdivision JB-03A (Rocky Point's)  
Date (mo/day/yr) 4-8-90  
Time (24 hr) 08:25  
Biologist H. Davis  

(A) Substrate type and % of segments:  
(1) Bedrock (30)  (2) Boulder (30)  (3) Cobble (10)  (4) Pebble (20)  (5) Sand (10)  (6) Silt —  

(B) Overall % cover of biota (% of segment): Dense 25%  Moderate 25%  Low 50% (20%)  

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (O)  

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Wildlife Observations/General Comments: The tillia, pebble, breeder, and the Fucus beds, Mytilus, Barnacles = gastropods, Crassulaceae, and Algae in the kelp beds include: Chthamalus, Tethis, coralla, spirogyra, acorn barnacles,  

Ecological Considerations: Harbor seals molt and pup in these areas. Eagles (ST)  

are feeding and nesting on the cliffs and pinnacles. (nest observed to mate of Shark)
## KODIAK ECOLOGICAL CONSTRAINTS

### 1A
Salmon stream mouth - fry outmigrant (4/15 to 7/31)
Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio remediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior to treatment for permits.

### 1C
Salmon fry nursery area (4/31 to 7/31)

### 1D
Kotzebue Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

### 1H
Remote release site

### 1I
Gill net area

### 1J
Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1.
East side Kodiak, East side Afognak - 7/4 to 10/1.

### 1K
Purse seine hook-off

### 1L
Set net sites
USFWS seinet uplands permit 5/15 to 9/15.

For Codes 1C through 1L contact ADF&G for specific dates, locations and constraints.

### 2M
Herring spawning (4/15 to 6/30)
Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. Contact ADF&G for specific dates and locations.

### 3N, 3P
Harbor seal and sea lion pupping (5/10 to 6/30)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

### 3O, 3Q
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts.

### 5R
Seabird colony (5/1 to 8/31)
Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance. Contact ADF&G and USFWS prior to treatment.

### 5S
Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic.

### 5T
All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

### 6U
Recreation:
- Tent sites (6/1 to 9/15)
- Anchorages (6/1 to 9/15)
- Forest Service cabins (6/1 to 9/15)
- Lodge (6/1 to 9/15)
- Special use destination

### 6Z
Subsistence area:
- Salmon harvesting (6/1 to 9/30)
- Finfish harvesting
- Deer harvesting (9/1 to 1/7)
- Invertebrate harvesting
- Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

For Codes 6Z through 7JJ contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park
ADF&G anadromous stream no. 248-40-10105
1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
5R Seabird colony (5/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1D Kotzei Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

11 Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1K Purse seine hook-off

1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 466-4791

2M Herring spawning (4/15 to 6/20)
Coho ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unseeded intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpil application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 466-4791

3P Harbor seal and sea lion pupping (6/10 to 7/4)

3R Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpil within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment dates.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/nestercolt concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothby 267-2208

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites (8/1 to 9/15)
6V Anchorage (8/1 to 9/15)
6W Forest Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (8/1 to 9/30)
H Finfish harvesting
7i Deer harvesting (8/1 to 7/7)
7j Invertebrate harvesting
7k Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inpil which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fai 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K0904 CP-001 SUBDIVISION: A DATE 4/26/90

NAME John Naughton SIGNATURE John J. Naughton

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

This segment consisted of very light oil. Mainly stain and spot with one area of small amount of mousse at far eastern end of segment. Recommend no treatment.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

One small 15 x 3 m area in the eastern portion of the segment contains patchy interstitial mousse/sediment around large boulders. Manual removal using small tools is recommended.

LAND MANAGER

NAME Carl Schaed SIGNATURE Carl Schaed

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Oiled debris should be removed from storm berm. The mousse at the south east end of the segment is difficult to access, mostly interstitial and under boulders. This oil can be expected to persist for a long time if not removed.
**SHORELINE OILING SUMMARY**

**SEGMENT** ST 11406

**SUBDIVISION** CACOA

**TEAM NO.** 19

**TIDE LEVEL** +1.3 ft (0.4 m)

**DATE** 4/26/90

**EST. SUBDIVISION LENGTH**: 2465 m

- Sun
- Clouds
- Fog
- Rain
- Snow

**UPLANDS DESCRIPTION**: Grass, Forest, Rock

**SURVEYED FROM**: Foot, Boat, Helo

**WORKING DIRECTION**: West to East

**SURFACE SEDIMENTS**: R 10 %, S 35 %, M 0 %, V 0 %

**SLOPE**: Lang 75 %, Hang 15 %, Vert 10 %

**WAVE EXPOSURE**: Low

**OIL CATEGORY LENGTH**: W 0 m, M 0 m, N 15 m, VL 200 m, NO 2350 m

### SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
<td>Asphalt Pavement</td>
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</tr>
<tr>
<td>Coat</td>
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</tr>
<tr>
<td>Stain</td>
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</tr>
<tr>
<td>Mousse</td>
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</tr>
<tr>
<td>Patties</td>
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<tr>
<td>Tarballs</td>
<td>X</td>
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<tr>
<td>Film</td>
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**OILED DEBRIS**: Logs, Vegetation, Trash, Debris

**PAVEMENT H F S NONE** sq. m by 0:

**NEAR SHORE SHEEN**: No

**OILED SHEEN** nearshore:

**OILED AMOUNT**:

**DID YOU COLLECT DEBRIS?** Yes ☐ No ☐

**TYPE**

**PHOTOGRAPHS**:

- Roll No.: ST-19-18
- Frames 1-3

### SUBSURFACE OIL

<table>
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<tr>
<th>PIT NO</th>
<th>PIT DEPTH (CM)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
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**COMMENTS** - OILING MAPS INDICATE AREAS NOT SURVEYED - THE AREAS WERE NOTED AS NOT OILED BY ROSEC

- 200 m - Oil in the first area is stain on logs and debris (plastic 100cm/100m)
- Sketch: The distribution is along a 200 m section of shoreline and sporadically distributed at the upper intertidal zone

- 350 m - Mousse extends to 2 cm
- Sketch: The distribution is along a 350 m section of shoreline and sporadically distributed at the upper intertidal zone

**REVIEWED**:

**DATE**: 4-29-9
SHORELINE ECOLOGICAL SUMMARY

Segment ST/KO204.CP-1  Subdivision A  Date (mo/day/yr) 4-26-90

Time (24 hr) 0840-0900  Biologist D. McCormick

(A) Substrate type and % of segments:
   (1) Bedrock 10  (2) Boulder 50  (3) Cobble 10  (4) Pebble 3  (5) Sand 5  (6) Silt 1

(B) Overall % cover of biota (% of segment): Dense 0  Moderate 10  Low 90

(C) Density, substrate preference (by number from A, above) & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

BARNACLES

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Wildlife Observations/General Comments: Oyster catchers & gulls
Most of segment is cobble/cobble/sand beach with only green algae on LITZ board/cobbled intertidal macrofauna confined to boulder beaches at end of segment.

Ecological Considerations: According to NOAA, sealion colonies at least one eagle nest are included in this segment. Neither of these eco resources were seen during our survey. Also, they are not noted on any USFWS or NPS resource maps. There is one anadromous stream (pikes, chubs & silvers) at the north end of the segment. See ECO map.
<table>
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<th>SPECIES</th>
<th>UITZ</th>
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<td>BOSSELLA/CORALLINA</td>
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<td>CLADOPHORA SPP</td>
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<td>ZOSTERA MARINA</td>
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| **FAUNA:**             |      |      |      |          |
| ANTHOPLEURA SPP       |      |      |      |          |
| (SEMI) BALUNUS CARIOUS |      |      |      |          |
| B. GLANDULA           | 2    |      |      |          |
| BRYOZOANS             |      |      |      |          |
| CHITONS (other than K. TUNICATA) |  | | | |
| CLAMS                 |      |      |      |          |
| CRABS                 |      |      |      |          |
| DERMASTERIAS IMBICATA |      |      |      |          |
| KATHARINA TUNICATA    |      |      |      |          |
| LEPTASTERIAS HEXACTIS |      |      |      |          |
| LIMPETS               |      |      |      |          |
| LITTORINA SPP         | 2    | 2    | 3    |          |
| NUCELLA SPP           | 2    | 2    | 3    |          |
| PACURUS SPP           |      |      |      |          |
| PISASTER OCHRACEUS    |      |      |      |          |
| POLYCHAETES           |      |      |      |          |
| PYCNOPODIA HELIANTHOIDES |   | | | |
| SEARLESIA DIRA        |      |      |      |          |
| SERPULIDS             |      |      |      |          |
| SIPHONARIA THERITES   |      |      |      |          |
| TEALIA                |      |      |      |          |

**DATE:** 4-26-90  **TIME:** 0740-0900  **TIDE HEIGHT:** -2.0' n + 3.0'
No Resources

XXX Wide
//// Medium
----- Narrow
TTTT Very Light
0000 No Oil

Map Key: GOA-62c
Name: 
Date: 
Data Entered: 

ADEC Segment Length: 8074 m

5000
5000
5000
0000
0000
0000
0000
0000
0000

METERS
MAP KEY: GOA-52c
Name: 
Date: 
Data Entered: 

ADFG 10105
(pink, chum, silver)

Aradomous Stream

CP-1

K-9-6-CP-1-A

XXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 8074m
No Resources
XXX Wide
/// Medium
---- Narrow
TTTT Very Light
0000 No Oil

CP-1

Map Key: G0A-62c
Name: LINDSAY ABKASHA
Date: 4/26/90
Date Entered:

NOT SURVEYED
REPORTED AS NOT OILED BY ADEC
NOT SURVEYED
REPORTED AS
NO OIL BY ADEC

XXXXX Wide

/// Medium

---- Narrow

TTTT Very Light

0000 No Oil

ADEC Segment Length: 8074m

Map Key: GOA-62b
Name: [Signature]
Date: 4/26/90
Data Entered:

CP-1
SHORELINE EVALUATION

SEGMENT ST/ K09-06-CP-02 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
Katmai National Park
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: DATE: 5/8/90

OILING CATEGORIZATION:
Wide_0 m: Medium_189 m: Narrow_320 m: V.Light_1918 m: No Oil_1241 m
Subsurface Oil Observed: Yes__ No X__ Maximum Depth________

RECOMMENDATIONS:
_____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
_____ Tarmat Removal
_____ Snare/Absorbent Booms
_____ Oil Snares (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Spot Washing:_____ Wands
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommended treatment includes manual pickup of mousse, oiled debris and oiled logs as indicated on sketch map. Bioremediate area indicated on sketch map. Work should be conducted between 7/2 and 8/14 due to pinniped constraints.

TAG COMMENTS: MONITOR TO ASSESS THE SITUATION OF THE OILED LOGS

TAG APPROVAL DATE: 5/12/90
ADEC Aut Weiler Aut Weiler
EXXON Aut Tel Fraud
NOAA Patty Kilby, E.R. balcon
USCG S. & G. Green, C. T. Parrotta

FOSC: DATE: 5/12/90

(Handwritten notes and signatures)
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kotel Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release sites

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area

1J Purse seine area

Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
1K Purse seine hook-off

1L Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 426-4791

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algal and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 426-4791

3P Harbor seal and sea lion pupping (6/10 to 7/1)

3Q Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235 ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377 ADF&G Tom Raths 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 6/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

6V Anchorages (6/1 to 9/15)

6W Forest Service cabins (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)

7H Finfish harvesting

7B Deer harvesting (6/1 to 1/7)

JU Invertebrate harvesting

7KX Bear harvesting (6/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 19-90 CP 153 SUBDIVISION: A DATE 4.26.92

USCG
NAME: D. Haven Jr. GMD USER SIGNATURE: D. Haven

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED COMMENTS
Oiled debri present on North side of island

ADEC
NAME: Francis J. Benn USER SIGNATURE: F. Benn

☐ NO TREATMENT RECOMMENDED ☒ TREATMENT SUGGESTED COMMENTS
Manual clean-up recommended; There are 2 main areas on Shaw Island of collectable oil:
1) A 9m x 15m band of mousse, + mousse saturated fine sediments on the N side of Shaw I, just to the east of a 4/6/8 beach. Clean-up crew should check drift beens for mousse patches + tarballs as well.
2) A 3m x 50m band of oil similar to that described above exists on a South west beach as well. Clean-up w/shovels + tarps will not be difficult. Clean-up crew should check other areas shown on SSAR field map to collect any other collectable oil.

LAND MANAGER NP
NAME: WILL TROYER SIGNATURE: W. Troyer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED COMMENTS
I basically agree with the ADEC representative. The long band of mousse on the North side can easily be removed by manual labor + a shovel as much of it is a treacherous boulder with a sand/notable render. Some sediment + debris in the NF areas are hard to find and the sediment is in future probably + be tared + little trouble removed. Most of the island received treatment +starttime + yes, took

APR-27-1998 16:46 FROM Exxon KODIAK TO 15643771 P.15

REVISION NO. D+0/92

NAME: WILL TROYER SIGNATURE: W. Troyer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED COMMENTS
I basically agree with the ADEC representative. The long band of mousse on the North side can easily be removed by manual labor + a shovel as much of it is a treacherous boulder with a sand/notable render. Some sediment + debris in the NF areas are hard to find and the sediment is in future probably + be tared + little trouble removed. Most of the island received treatment +starttime + yes, took
**SHORELINE OILING SUMMARY**

**OG Action:** USCG / Exxon

**BIO:** USCG / Exxon

**EXXON Action:** ADEC

**TEAM NO.:** 10

**TIDE LEVEL:** -3 ft + 5 ft

**DATE:** 4/25/90

**EST. SUBDIVISION LENGTH:** 2333 m

**LAND REP:** Troy, June

**SUBDIVISION:** K9-6 - C9 - 2

**TIME:** 1:10 PM

**SUBDIVISION:** 12:45

**TEAM NO.:** 10

**DATE:** 4/25/90

**EST. SUBDIVISION LENGTH:** 2333 m

**TEAM NO.:** 10

**TIDE LEVEL:** -3 ft + 5 ft

**DATE:** 4/25/90

**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>ASPHALT</td>
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<tr>
<td>PAVEMENT</td>
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<td></td>
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<tr>
<td>COVER</td>
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<tr>
<td>COAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MINT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

**PAVEMENT H F S O sq.m by cm**

**PATTIES/TARBALLS O BAGS**

**NEAR SHOREBALLS? BR RW SL TL**

**OILED DEBRIS**

<table>
<thead>
<tr>
<th>AMOUNT</th>
<th>SM MD LG</th>
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**DID YOU COLLECT DEBRIS?**

<table>
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**TYPE**

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**#BAGS**

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**Photographs:**

- Roll No: ST-20 - 7, ST-20 - 8
- Frames: 31-37 2 - 9

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATERIAL</th>
<th>OIL/FILM COLOR</th>
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</tr>
<tr>
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<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td></td>
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</tbody>
</table>

**COMMENTS**

Island has extensive rock platform on all sides, with width at low tide of up to 120 meters on the north shore. The area with the highest degree of oiling is located on the north shore in the middle of the island, just north of a small pond and just east of a sand/barren patch beach. Pit depths were minimal due to rock/boulder composition of platform veneer. An significant percentage (> 50%) of the very light oiling was comprised of very sparse, occasional stain.

**REVIEWED**

[Signature]

**DATE:** 4/27/90
**SEGMENT** S7/ K-9-6- CP-2

**SUBDIVISION** K-9-6 - CP-2 A

**DATE** 4/26/90

**CHECKLIST**

- N Arrow
- Approx. Scale
- Seg/Suit Entry
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Cal. MPH/WL
- DML
- Profile Location(s)
- Plot(s)
- Pit Location(s)
- Photo Location(s)

**LEGEND**

- A
- NS - No Subsurface Oil

**Sketch Maps**

**Sketch Map A**

A-A' ≤ 120m

- 9m x 140m medium band in VITZ ST CT/PB
- MS/P ≤ 8cm thick x ≥ 100cm
- Distance between D + C

**Sketch Map B**

B-B' ≤ 60m

- 3m x 50m narrow band in VITZ ST/P, MS/P, Ws ≤ 8cm thick
- By 70cm channel, was mixed w/ sand

**Oil Character Length**

AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____
SHORELINE ECOLOGICAL SUMMARY

Segment ST/159-6 Subdivision CP-02 Date (mo/day/yr) 4/26/90
Time (24 hr) 09:20 Biologist H. Davis

(A) Substrate type and % of segments:
   (1) Bedrock 40 (2) Boulder 40 (3) Cobble 10 (4) Pebble 10 (5) Sand 10 (6) Silt

(B) Overall % cover of biota (% of segment):
   Dense 30% Moderate 30% Low 40% (40%)

(C) Density, substrate preference (by number from A, above) &
   vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
   juveniles / adults (x); new settlement (y)

BARNACLES Continues mostly moderate.

<table>
<thead>
<tr>
<th>Density</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
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<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
</tbody>
</table>

MYTILUS small patches all the way around the island.

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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
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</tr>
<tr>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
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</tr>
<tr>
<td>1M</td>
<td>1L</td>
<td>1U</td>
<td></td>
</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
</tbody>
</table>

GASTROPODS Continues around the island. Dense, except sparse. Nuclea rare.

<table>
<thead>
<tr>
<th>Density</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td>1M</td>
<td>1L</td>
<td>1U</td>
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</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
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<td>1M</td>
<td>1L</td>
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</tr>
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<td>1L</td>
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<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
</tbody>
</table>

FUCUS Patchy and sparse all the way around the island.

<table>
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<th>Density</th>
<th>Moderate</th>
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<th>Rare</th>
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<tr>
<td>1U</td>
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<td>1L</td>
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<td>1L</td>
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<td>1M</td>
<td>1L</td>
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</tr>
<tr>
<td>1L</td>
<td>1U</td>
<td>1M</td>
<td></td>
</tr>
</tbody>
</table>

Wildlife Observations/General Comments: 15-25 Sandhill Cranes, 3 Tundra Swans, Glacors, Kiplo, guil, 4 pairs of Osprey Calloce, sea otter feeding just off shore. A large male Steller was spotted in a small pool in the upper intertidal. Spring algae growth is

Ecological Considerations: Seabird Colony. Harbor seals haul out and pup on the North East

3
**FLORA:**

<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UITZ</th>
<th>MITZ</th>
<th>UITZ</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td>BOSSTELLA/CORALLINA</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>CALLIARThRON/CORALLINA</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>CLADOPHORA SPP</td>
<td></td>
<td>3</td>
<td>2,3</td>
<td></td>
</tr>
<tr>
<td>COSTARIA SPP</td>
<td></td>
<td></td>
<td>2,3</td>
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<tr>
<td>ENDOCLADIA MURICAATA</td>
<td>1</td>
<td>1, 2</td>
<td>1</td>
<td>De-drift?</td>
</tr>
<tr>
<td>FILMAENTOUS GREENS</td>
<td></td>
<td>1, 2</td>
<td>1</td>
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<tr>
<td>FILAMENTOUS REDS</td>
<td>1</td>
<td>2, 2</td>
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<tr>
<td>GLOIOPELTIS FURCATA</td>
<td>1</td>
<td>1, 2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>HALOSACCION GLANDIFORME</td>
<td>1</td>
<td>1, 2</td>
<td>1</td>
<td>Very sparse growth (individual Demospongia)</td>
</tr>
<tr>
<td>LAMINARIA SPP</td>
<td></td>
<td></td>
<td>1, 2</td>
<td></td>
</tr>
<tr>
<td>LITHOTHAMNION</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>NERBOCYSTIS SPP</td>
<td></td>
<td>1</td>
<td>2</td>
<td>Off shore + in drift also</td>
</tr>
<tr>
<td>PORPHYRA SPP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RALPHIA/HILDENBRANDIA</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RHOSTOMELA LANDA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Large shallow pool &amp; rock shelf filled</td>
</tr>
<tr>
<td>RHOBOMENTIA PALMATA</td>
<td></td>
<td>1, 2</td>
<td>1</td>
<td></td>
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<tr>
<td>SCYTOPHISON SPP</td>
<td>1, 2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ULYA SPP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ZOSTERA MARINA</td>
<td></td>
<td></td>
<td>1</td>
<td>Neat, fresh water run off</td>
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**FAUNA:**

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<th>MITZ</th>
<th>UITZ</th>
<th>COMMENTS</th>
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</tr>
<tr>
<td>(SEMI) BALANUS CARJOSUS</td>
<td>1, 2</td>
<td>1, 2</td>
<td>1, 2, 3</td>
<td></td>
</tr>
<tr>
<td>B. GLANDULA</td>
<td>1, 2</td>
<td>1, 2</td>
<td>1, 2</td>
<td></td>
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<tr>
<td>BRYOZOANS</td>
<td></td>
<td></td>
<td>*</td>
<td>* Membranchia on drift help.</td>
</tr>
<tr>
<td>CHITONS (other than K. TUNICATA)</td>
<td></td>
<td></td>
<td>1</td>
<td>Parvicella on corallina</td>
</tr>
<tr>
<td>CLAMS</td>
<td></td>
<td></td>
<td>1</td>
<td>Shelf, molusca, Monera, Turidus</td>
</tr>
<tr>
<td>CRABS</td>
<td></td>
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<tr>
<td>DERMASTERIAS DUMBICATA</td>
<td></td>
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<tr>
<td>KATHARINA TUNICATA</td>
<td>1, 2</td>
<td>1</td>
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<tr>
<td>LEPTASTERIAS HEXACTES</td>
<td></td>
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<tr>
<td>LIMPETS</td>
<td>1, 2</td>
<td>1</td>
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</tr>
<tr>
<td>LITTORINA SPP</td>
<td>1, 2</td>
<td>1, 2</td>
<td>1</td>
<td>Very numerous</td>
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<tr>
<td>NUCELLA SPP</td>
<td></td>
<td>1, 2</td>
<td></td>
<td>a barnacle in sheltered area</td>
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<tr>
<td>PAGURUS SPP</td>
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<td></td>
<td>1, 2</td>
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</tr>
<tr>
<td>PISASTER OCHRACEUS</td>
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<td>POLYCHAETES</td>
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<td>PYCNOPODDA HELIANTHODIES</td>
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<tr>
<td>SERRIESIS DIRE</td>
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<tr>
<td>SERPULIDS</td>
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<td>SIPHONARIA THERMITES</td>
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<tr>
<td>TEALIA</td>
<td>1, 2</td>
<td>1</td>
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</tbody>
</table>

**DATE:** 4/24/90  **TIME:** 08:20 - 13:00  **TIDE HEIGHT:** -3 to -5.5

1 = BEDROCK  2 = BOULDER  3 = COBBLE  5 = SAND  6 = SILT  4 = Pebble
RECRUITMENT AND MORTALITY

1) Observations of recent settlement (S) or new growth (G):
   a) Barnacles, less than 1mm (S), 1-3mm (G)
      1. Vertical distribution (LTZ, MTZ, UTZ):
         (S) Rare in LTZ, MTZ (G) LTZ - MTZ, but mostly found in UTZ
      2. Substrate (Rock, Boulder, Cobble, etc. Note if oiled/unoilled):
         Rock - Cobble, None in oiled area
      3. Horizontal distribution (Dense, Sparse, Patchy, Cont., etc.):
         Continuous/Moderate
   b) Mytilus less than 2mm (S), 2-5mm (G)
      1. Vertical distribution:
         No (S); Rare (G) in LTZ + MTZ
      2. Substrate (Note if oiled/unoilled):
         Rock - Cobble, None in oiled area
      3. Horizontal distribution:
         Small scattered patches all the way around the island.
   c) Littorina, eggs or less than 2mm dia. No eggs observed.
      1. Vertical distribution:
         MTZ - LTZ, Rare - Sparse <2mm dia.
      2. Substrate (Note if oiled/unoilled):
         Rock - Cobble, None in oiled area.
      3. Horizontal distribution:
         Continuous around the island.
   d) Fucus, other algae, seagrass (Note species and what type of growth)
      1. Vertical distribution:
         UTZ, MTZ, LTZ
      2. Substrate (Note if oiled/unoilled):
         Rock - Cobble, None in oiled area.
      3. Horizontal distribution:
         Patchy around the island.
   e) Other (Describe):
      The algae look like it is starting its spring growth.

2) Observations of mortality:
   a) Barnacles (Describe as % dead individuals or scars)
      1. Vertical distribution:
         LTZ, MTZ 60% - 100% range, MTZ 80% range 5% - 20% range
      2. Substrate (Note if oiled/unoilled):
         Rock - Cobble, Very few in oiled zone.
      3. Horizontal distribution:
         Continuous/patchy around the island
   b) Mytilus (Describe as % Note if drilled or otherwise clearly predated)
      1. Vertical distribution:
         LTZ - UTZ are 10% mortality, 0 - 30% range
      2. Substrate (Note if oiled/unoilled):
         Never in an oiled area.
      3. Horizontal distribution:
         Rare/Patchy around the island
   c) Other:
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-06-CP-02 SUBDIVISION A (1 of 1)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
</tbody>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

<table>
<thead>
<tr>
<th>3N,O,P,Q</th>
<th>Harbor Seal &amp; Sea Lion</th>
<th>Closed to manual pickup prior to 7/1 and after 8/15.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5R</td>
<td>Seabird Colony</td>
<td>Closed to all activities; work site is less than 800m from seabird colony.</td>
</tr>
</tbody>
</table>

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.

FOSC

Prepared by

Date 6-15-89

Date 6/15/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT KO8-08-CP-02 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

OPEN (NPS & USFWS MONITORS
REquired)

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 584-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

3N, O, P, Q Harbor Seal & Sea Lion
Pupping and Molting

5R Seabird Colony

ST Bald Eagle Nest

OTHER ECOLOGICAL CONSIDERATIONS
If seabird colony constraint is removed, other ecological considerations will apply.

USFWS 6/1990 map indicates an active nest in
SUBDIVISION A. No constraint to manual pickup more
than 400 ft. from active nest. USFWS monitor required
for work within 400 ft. of

nest.

G.A. Rentar
for FOSC

FOSC

Date 6-15-90

Prepared by 6/15/90
Access denied
Make Luke 6/13/90
SHORELINE EVALUATION

SEGMENT ST/ K09-08-CD-01 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature]
DATE: 5/14/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 39 m: V.Light 372 m: No Oil 1072 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
____ No Treatment Recommended ______ Snare/Absorbent Booms
X Treatment Recommended ______ Oil Snares (pom poms)
X Manual Pickup ______ Absorbents (pads, rolls, etc)
____ Bioremediation ______ Spot Washing: ______ Wands
____ Tarmat Removal ______ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment is manual pickup of mousse patties. Work should be conducted after 6/1 with USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90
ADEC Art Williamson, Director
EXXON [Signature] [Date]
NOAA Gary Peterson, U.S. Fish & Wildlife
USCG D.W. Rome [Signature] [Date]
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3124

1D Kodiak Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3124

1I Gill net area

1J Purse seine area

Mainland, West side Kodiak; Shuyak & Moser/Olga Bay (5/9 to 10/1)

East side Kodiak; East side Afognak (7/4 to 10/1)

1K Purse seine hook-off

1L Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 468-4781

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 468-4781

3M Harbor seal and sea lion pupping (6/10 to 7/1)

3L Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADFG Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADFG Tom Rotzy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 6/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Tent sites (6/1 to 9/15)

Anchorage (6/1 to 9/15)

Forest Service cabins (5/1 to 9/15)

Lodge (6/1 to 9/15)

Special use destination

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)

7N-1 Deer harvesting (6/1 to 1/7)

7L Invertebrate harvesting

7KK Beer harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2358
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/1K9-08 60-001 SUBDIVISION: K9-8-C0-14 DATE 4-27-90

USCG
NAME: D. Haven
SUBSCRIBER SIGNATURE: D. Haven

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
This area does have mousse present, but majority of it is deep in the crevices between boulders and would be almost impossible to recover. I have monitored this area all winter long and it has dramatically improved on its own the last two months since the ice has melted.

ADEC
NAME: Francis J. Benis
SIGNATURE: Francis J. Benis

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
Manual cleanup recommended for small area of collectible oil. If cleanup crew is in the area, then they should cruise CO-001 w/SSAR map to remove recoverable oil saturated sediments on a 10 x 50 m area indicated on maps.
Cape Douglas is a high energy area, but mousse saturated sediments apparently are able to persist among cobbles/boulders.

LAND MANAGER: NPS
NAME: Will Troyer
SIGNATURE: Will Troyer

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
With time and shore some mousse can be removed. This is a high energy beach and will probably clean itself quickly then most
## SHORELINE OILING SUMMARY

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAVEMENT</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>COAT</td>
<td>✓</td>
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<tr>
<td>MOUSSE</td>
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<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
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<td></td>
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</tr>
</tbody>
</table>

### OILED DEBRIS

- **AMOUNT**
  - **SM**
  - **MD**
  - **LG**

- **DID YOU COLLECT DEBRIS?**
  - YES [ ]
  - NO [ ]

### OIL DISTRIBUTION

- **PATTIES / TARBALLS**
  - 0

### OIL CATEGORY

- **PIT**

### SURFACE SEDIMENTS

- **SURFACE SEDIMENTS**
  - **R %**
  - **H %**
  - **C %**
  - **V %**
  - **G %**
  - **S %**
  - **M %**
  - **O %**

### SLOPE

- **Slope**
  - **Lang**
  - **Hang**
  - **Vent**
  - **WAVE**

### OIL CATEGORY LENGTH

- **W**
  - **0 m**
  - **M**
  - **0 m**
  - **N**
  - **0 m**
  - **S**
  - **0 m**
  - **V**
  - **L**
  - **0 m**

### SURFACE OIL DISTRIBUTION

- **OIL / FILM COLOR**
  - **SU**
  - **UI**
  - **UL**

### OIL ZONE

- **AN**
  - **EA**
  - **SH**

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>OILED DEBRIS</th>
<th>OILED DEBRIS AMOUNT</th>
<th>OILED DEBRIS TYPE</th>
<th>OILED DEBRIS BAGS</th>
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<tr>
<td>3</td>
<td></td>
<td></td>
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</table>

### COMMENTS

- Shallow in rock platform with B+C veneer in upper 500 cm. Columnar structure is 500 m x 500 m band. VC band was observed (see map). Other 500 m of VC oiling was from area of Skewer map 6 to 5 segment boundary and consists of VC, very sparse stain. Pit depths are minimal due to R+B.

- Mousse in interstitial spaces between rocks, boulders, e.g. (8 cm thick).
SEGMENT ST K4-B-CD-1
SUBDIVISION K4-B-CO-1A

DATE 4/27/90

CHECKLIST
- Marker
- Annot
- Scale
- Seg/SubBoundary
- Oil Dist.
- Width
- Length
- % Cover
- Substrate Character
- Est. HWP/WL
- SSL
- Profile Location(s)
- Profile(s)
- Plot Location(s)
- Photo Location(s)

LEGEND

1 A
- Fr - No Subsurface Oil

2 A
- Fr - Subsurface Oil

Continuous Distribution

Broken Distribution

Partly Distribution

Splashed Distribution

Vegetation

- Fr - Plant location, distance, and number

Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____
### SHORELINE ECOLOGICAL SUMMARY

**Segment ST K9-08**  
**Subdivision CD-01**  
**Date (mo/day/yr)** 4/27/98

**Time (24 hr)** 7:45  
**Biologist** H. Davis

(A) **Substrate type and % of segments:**
1. Bedrock 40%  
2. Boulder 40%  
3. Cobble 10%  
4. Pebble 5%  
5. Sand 5%  
6. Silt

(B) **Overall % cover of biota (% of segment):** Dense 10%  
Moderate 30%  
Low 60% (20%)

(C) **Density, substrate preference (by number from A, above), & vertical zonation of major taxa:** (Upper-U; mid-M; low L-tidal-L);
juveniles/adults (X), new settlement (3)

#### BARNACLES

<table>
<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1U</td>
<td>2M</td>
<td>1L</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
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</table>

**Photographs:**

*Roll No. ST-20-8*  
*Frames 11-14*

#### MYTILUS

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<thead>
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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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</thead>
<tbody>
<tr>
<td>1U</td>
<td>2M</td>
<td>1L</td>
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</table>

**Photographs:**

*Roll No. ST-20-8*  
*Frames 11-14*

#### GASTROPODS

<table>
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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td>1U</td>
<td>2M</td>
<td>1L</td>
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</tr>
<tr>
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<td>4</td>
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<td>8</td>
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**Photographs:**

*Roll No. ST-20-8*  
*Frames 11-14*

#### FOCUS

<table>
<thead>
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<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td>1U</td>
<td>2M</td>
<td>1L</td>
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</tr>
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<td>3</td>
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<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

**Photographs:**

*Roll No. ST-20-8*  
*Frames 11-14*

---

Wildlife Observations/General Comments: Rocky shelves with sand, gravel, and cobble being moved across them. Buried anthropogenic worn down dishes. Few Barnacles, Rhozomenia, Fucus and Corallinaea are the main algae. Halimeda Paniola on rocks. *Pvella sp.* in crevice. *Euleanomia sp.* in crevice. Spinulos are present. All of the distributions were patchy due to the patchiness of substrate.

Ecological Considerations: Anadromous stream at the north end of the segment. Pike salmon spawning.

---

*CD-01*
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UTZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLORA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BOSSIELLA/CORALLINA</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>In bedrock pools only</td>
</tr>
<tr>
<td>CALLIARThRON/CORALLINA</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLADOPOHORA SPP</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>COSTARIA SPP</td>
<td></td>
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</tr>
<tr>
<td>ENDOCLADIA MURICATA</td>
<td>1</td>
<td>1,2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILMAENTOUS GREENS</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>FILAMENTOUS REDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLOIOPELTIS FURCATA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HALOSACCION GLANDIFORME</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMINARIA SPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LITHOTHAMNION</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEREOCYSTIS SPP</td>
<td></td>
<td></td>
<td></td>
<td>In drift</td>
</tr>
<tr>
<td>PORPHYRA SPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RALPHSIA/HILDENBRANDIA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RHODOMELA LARIX</td>
<td>1,2</td>
<td>1,2</td>
<td></td>
<td>Most abundant algae in this section</td>
</tr>
<tr>
<td>RHODOMENIA PALMATA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCYTOSIPHON SPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ULVA SPP</td>
<td>1*</td>
<td>1*</td>
<td></td>
<td>On <em>Rhodomela larix</em></td>
</tr>
<tr>
<td>ZOSTERA MARINA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTOMOROMORPHA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAUNA:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ANTHOPLEURA SPP</strong></td>
<td></td>
<td>1,2</td>
<td>1</td>
<td>On underside of bedrock and intertidal</td>
</tr>
<tr>
<td>(SEM) BALUNUS CARIOSUS</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>B. GLANDULA</td>
<td>1,2</td>
<td>1,2</td>
<td>1,2</td>
<td></td>
</tr>
<tr>
<td>Bryozoans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chitons (other than K. Tunicata)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crabs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermasterias imbricata</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KATHARINA TUNICATA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leptasterias hexactis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limpets</td>
<td>1</td>
<td>1,2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LITTORINA SPP</td>
<td>1,2,3</td>
<td>1,2,3</td>
<td>1,2,3</td>
<td>Very common</td>
</tr>
<tr>
<td>NUCELLA SPP</td>
<td>1,2</td>
<td>1,2</td>
<td>1,2</td>
<td></td>
</tr>
<tr>
<td>PAEURUS SPP</td>
<td>1,2</td>
<td>1,3</td>
<td>1</td>
<td>Mostly at bottom of pools</td>
</tr>
<tr>
<td>Pisaster ochraceus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polychaetes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pycnodida helianthoideae</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEARLEIA DITRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SERPULIDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siphonaria thesites</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tealia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cucumaria ? Holothurid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halocynthia parva</td>
<td></td>
<td></td>
<td></td>
<td>Very Common</td>
</tr>
</tbody>
</table>
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest NO CONSTRAINT. Authorized per memo dated 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unaltered biota and substrate.
ECOLOGY MAP
SEGMENT K9N-8 CD-1
SUBDIVISION __ (___ of ___)

EXXON Company, USA
Map Key: AKP-CD-1
June 10, 1990

1 Inch = 1443 feet

STREAM #
ZNE-40-10150

TREATMENT

Work Area

Seabird Colony
Active Eagle Nest
Inactive Eagle Nest

METERS

0 660 888
SHORELINE EVALUATION

SEGMENT ST/ K09-08-CD-02 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
ST All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
Eagle nest on NOAA list.
See attached Ecological Constraint sheet for specific constraints and
contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and
substrate.

SHPO SIGNATURE: [Signature] DATE: 5/14/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 93 m: V.Light 38 m: No Oil 694 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
___ No Treatment Recommended ___ Snare/Absorbent Booms
X Treatment Recommended ___ Oil Snares (pom poms)
X Manual Pickup ___ Absorbents (pads, rolls, etc)
X Bioremediation ___ Spot Washing: ___ Wands
___ Tarmat Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse
patties and 2) bioremediation of area shown on attached sketch map.
Work should be conducted after 6/1 with USFWS approval regarding eagle
nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90
ADEC Art Wouse [Signature] FOSC: [Signature] DATE: 5-16-90
EXXON [Signature] Monitoring access need for customaded
NOAA [Signature] following mousse pickup
USCG [Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/K9-09 -C-202 SUBDIVISION: KA-8 - CD - 24 DATE 4-27-70

USCG
NAME D. D. HAVENT J. TUNIS/USCG SIGNATURE D. D. Havent J.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

This area has a small amount of mousse within a band mentioned in 06 Report. Oil band consist of such small amounts of stain (none being recoverable that treatment can’t be recommended. I have monitored this area through the winter and it has dramatically improved itself.

ADEC
NAME Francis J. Berens SIGNATURE Francis J. Be-

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED
COMMENTS

Manual clean-up recommended w/stoves & trailers.
Segment has oiled areas at western & eastern edges, it has an area of NO oil in between these.
Mousse saturated sediments in patchy distribution exist in oiled areas & are collectable.
Clean-up crew should have 55 gal bags with them.

LAND MANAGER
NAME WILL TROYER SIGNATURE Will Troyer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED
COMMENTS

Some mousse could be removed by manual means in those areas of major oil concentration.
It is a high entry beach that probably will eventually clean itself.
SHORELINE OILING SUMMARY

OG Action: USCG Hains
BIO Division: LAND REP NPS, Topen, Texas
SEGMENT ST/ K-9-8-CD-2
EXXON Average: ADEC

TIME 8:45 10:30: So
TEAM NO. 30
TIDE LEVEL 4.15 ft - 2.0 DATE 4/27/90
EST. SUBDIVISION LENGTH: 514 m

UPLANDS DESCRIPTION: ☐ Grass ☐ Forest ☐ Rock
SURVEYED FROM: ☐ Foot ☐ Boat ☐ Helo
WORKING DIRECTION: W to E

SURFACE SEDIMENTS: ☐ Grass ☐ Foresta ☐ Rock

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAVEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>STAIN</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>MOUSSE</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

PAVEMENT H F S 0 sq m by 0 cm
PATTIES/TARBALLS 0 BAGS
NEAR SHORE SHEEN? ☐ BR RW SL TL

OILED DEBRIS AMOUNT
LOGS SM MD LG
VEGETATION
TRASH
DEBRIS

DID YOU COLLECT DEBRIS? ☐ YES ☐ NO
TYPE

Photographs:
Roll No. ST-20-8
Frames 15-20

SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT</th>
<th>PIT DEPTH</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATERIAL</th>
<th>OILED MATERIAL BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE A N A</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>C D</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>C D</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>C D</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>BR</td>
</tr>
</tbody>
</table>

COMMENTS: Shoreline is rock platform w/ B. M. veneer. Two areas of oil were observed (see maps). Pit depths are minimal due to R and B. Mass was observed in interstitial spaces between rocks, boulders, cobble (-9 cm thick).

REVIEWED: 5/1/90

DATE: 5/1/90
SEGMENT ST/K4-8-CV-2
SUBDIVISION K4-8-CV-2A

DATE 4/27/90

CHECKLIST

- N Amow
- Approx. Scale
- Seg/Sub Boundary
- Oil Dike
- Wash
- Length
- % Cover
- Substrate Character
- Est. HWL/ML
- SSL
- Profile Location(s)
- Profile(s)
- Pit Location(s)
- Photo Location(s)

LEGEND

1 \( \Delta \)
- Pit - No Subsurface Oil

2 \( \Delta \)
- Pit - Subsurface Oil

EC/E
- Continuous Distribution

CT/B
- Broken Distribution

CT/P
- Patchy Distribution

CT/3
- Splashed Distribution

Oil Vegetation

Oil Character

(m): AP PO CV 140 CT 220 ST 220 MS 140 -- TB FL NO 544
SKETCH MAP A

SEGMENT ST/ K3-B - CP-2
SUBDIVISION K3-B - CP-2A
DATE 4/27/90

CHECKLIST
- Mlnner
- AppeM. Bane
- Sra/Sr. Bnlry
- Cbl Dlsl
- Heaht
- Lngth
- % Cover
- Submt Character
- Est. Hmla/Wl
- Esl.
- Pickle Location(s)
- PROFILE(s)
- PSI Location(s)
- Photo Location(s)

LEGEND
1 Δ
2 Δ

Ph. - No Subsurface Oil
Ph. - Subsurface Oil

CT/C Continuous Distribution
CT/B Broken Distribution
CT/P Pencil Distribution
CT/S Splashed Distribution

Oil Character (m): AP - PO - CV - CT - ST - MS - TB - FL - NO
SKETCH MAP B

DATE: 4/27/90

CHECKLIST

- Name
- Area/
- Scale
- Geo/Strat.
- Oil Dist.
- Water
- Length
- % Cover
- Substrate Character
- Est. HNL/AWG
- SSL
- Profile Location(s)
- Profile(d)
- Pin Location(s)
- Photo Location(s)

LEGEND

1
- No Subsurface Oil

2
- Subsurface Oil

CT/C
- Continuous Distribution

CT/B
- Broken Distribution

CT/P
- Patchy Distribution

CT/S
- Splashed Distribution

- Oiled Vegetation

- Photo location, direction, and number

Oil Character: [m]: AP PO CV CT ST MB TB FL NO

10m x 60m Vl and narrow band in upper Vite
ST/SP, m5/fp

10m x 60m Vl + narrow band in Vite
ST/SP, m5/fp

B-B' = 12m

6m cliff
SHORELINE ECOLOGICAL SUMMARY

Segment ST  19-08  Subdivision CD-02  Date (mo/day/yr)  4/27/90

Time (24 hr)  8:40  Biologist  H. Davis

(A) Substrate type and % of segments:
(1) Bedrock 40  (2) Boulder 40  (3) Cobble 10  (4) Pebble 5  (5) Sand 5  (6) Silt

(B) Overall % cover of biota (% of segment): Dense 10%  Moderate 30%  Low 60%  (30%)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L):
juveniles / adults (%) , new settlement (3)

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bedrock</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boulder</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobble</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pebble</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silt</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Photographs:
Roll No. ST-20-8
Frames 15-20

BARNACLES continuous along segment, sparse to dense distribution

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

MYTILUS an encrustees, sparse - rare

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

GASTROPODS Ulitnes, dense - moderate, limpets mod - sparse, Nassa sp. sparse - rare

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

FUCUS patching distribution, moderate - sparse

<table>
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<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Wildlife Observations/ General Comments: Cichromia ignea gulls, Fucus, Rhodochorton
were the dominant algae. Some limpets in the low intertidal. Littorina littorea
were common, the substrate type varied, occurring upon sand and stone boulders.
Nassa sp. adult (canaliculata) It looks like spring
growth is just beginning. Pagurus sp. with eggs...

Ecological Considerations: There is an anomalous stream in the segment next to this one.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UTZ</th>
<th>MTZ</th>
<th>LTZ</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLORA:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bossiella/corallina</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calliasthiron/corallina</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cladophora spp.</td>
<td></td>
<td>1.2</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Costaria spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endocladia muralcata</td>
<td>1.2</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filamentous greens</td>
<td></td>
<td>1.2</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Filamentous reds</td>
<td></td>
<td></td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Gloiopeltis furcata</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halosaccion glandiforme</td>
<td></td>
<td>1</td>
<td></td>
<td>Old large plants</td>
</tr>
<tr>
<td>Laminaria spp.</td>
<td></td>
<td>1.2</td>
<td></td>
<td>Wide band in LTZ</td>
</tr>
<tr>
<td>Lithothamnion</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Nerocystis spp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Porphyra spp.</td>
<td>2.7</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ralfhia/tildenbrandia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhodomela lardx</td>
<td></td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhodomenia palmata</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Scytosiphon spp.</td>
<td></td>
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</tr>
<tr>
<td>Ulva spp.</td>
<td></td>
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</tr>
<tr>
<td>Zostera marina</td>
<td>1.2</td>
<td>1.2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Enteromorpha</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAUNA:</strong></td>
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</tr>
<tr>
<td>Anthopleura spp.</td>
<td></td>
<td>1</td>
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</tr>
<tr>
<td>(semi) Balanus cariosus</td>
<td></td>
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<tr>
<td>B. Glandula</td>
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<tr>
<td>Bryozoaens</td>
<td></td>
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<tr>
<td>Chitons (other than K. Tunicata)</td>
<td></td>
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<tr>
<td>Clams</td>
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<tr>
<td>Crabs</td>
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<tr>
<td>Dermasterias tuberculata</td>
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<tr>
<td>Katharina tunicata</td>
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<tr>
<td>Leptasterias hexactis</td>
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<tr>
<td>Limpets</td>
<td>1.2</td>
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<td></td>
</tr>
<tr>
<td>Littorina spp.</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>Dense</td>
</tr>
<tr>
<td>Nucella spp.</td>
<td>1</td>
<td>1.2</td>
<td>1.2</td>
<td>Edge of Coralliumtum rosso</td>
</tr>
<tr>
<td>Pagurus spp.</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Pisaster ochraceus</td>
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<td>Polychaetes</td>
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<td>Pycnothyla helianthoides</td>
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<tr>
<td>Searsenia dira</td>
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<tr>
<td>Serpulids</td>
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</tr>
<tr>
<td>Siphonaria thersites</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Tealia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Halichondria penicillata</td>
<td>1.2</td>
<td>1.2</td>
<td>1.2</td>
<td>Very abundant</td>
</tr>
</tbody>
</table>
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-08-CD-02 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>OPEN</th>
</tr>
</thead>
</table>

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest

No constraint to manual pickup. Authorized per memo 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

Prepared by Rex R. Coulter
Date 06/11/90

FOS-signature
Date 6/13/90
ECOLOGY MAP
SEGMENT K9N-8 CD-2
SUBDIVISION A (Lot 1)

EXON
Exxon Company, USA
Map Key: MK-CD-2
June 10, 1990

1 inch = 1559 feet

TREATMENT

★ Seabird Colony
△ Active Eagle Nest
▲ Inactive Eagle Nest
WORK PLAN ADDENDUM

Segment K09-08-CD-002 Subdivision A Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   • FOSC Request
   • Landowner comments

2. ADJUSTMENT TO WORK PLAN
   • No bioremediation

SHPO APPROVAL NEEDED YES ___ NO ___
SHPO SIGNATURE ______________________

TAG APPROVAL DATE 5/31/90
ADEC Art Weiner Art Weiner
EXXON Art Tonn Geo
NOAA Josefa Talbot Josefa Talbot
USCG G.A. Reiter G.A. Reiter
SHORELINE EVALUATION

SEGMENT ST/ K09-08-CD-03 SUBDIVISION A (1 OF 2) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1) - Active eagle nests (3/1 to 9/1)
Eagle nest on NOAA list.
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unconfirmed biota and substrate.

SHPO SIGNATURE: Holm DATE: 5/14/90

OILING CATEGORIZATION:
Wide 0 m: Medium 31 m: Narrow 0 m: V.Light 425 m: No Oil 0 m
Subsurface Oil Observed: Yes No Maximum Depth

RECOMMENDATIONS:

X Treatment Recommended

Snare/Absorbent Booms

Oil Snares (poms)

Absorbents (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse, 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/90

ADEC

EXXON

NOAA

USCG

FOSC: DATE: 5/18/90

Cessation of Remedial Actions as planned following manual mousse pickup. If needed, apply mousse in intended zone.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
   No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage.
   No bioremediation or other chemical application within 100m of stream. Contact ADF&G Habitat Division prior
to treatment for permits.
1C Salmon fry nursery area (4/31 to 7/31)
1D Kodiak Bay Hatchery release
   Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
1E Remote release site
1F Gill net area
1G Purse seine area
   Mainland, West side Kodiak, Shuyak & Moser/Olga Bay - 6/9 to 10/1.
   East side Kodiak, East side Afognak - 7/4 to 10/1.
1H Purse seine hook-off
1I Set net sites
   USFWS setnet uplands permit 5/15 to 9/15.
   For Codes 1C through 1I contact ADF&G for specific dates, locations and constraints.
2M Herring spawning (4/15 to 6/30)
   Restrict boat traffic to essential minimum. Avoid damage to unooiled intertidal and subtidal algae and seagrass.
   Contact ADF&G for specific dates and locations.
3H, 3P Harbor seal and sea lion pupping (5/10 to 6/30)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
   horizontal and 300m vertical distance from haulouts.
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
   Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m
   horizontal and 300m vertical distance from haulouts.
5R Seabird colony (5/1 to 8/31)
   Restrict air traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m
   vertical distance. Contact ADF&G and USFWS prior to treatment.
5S Shorebird/waterfowl concentration (4/1 to 5/15)
   Restrict all activity to essential minimum, especially air traffic.
5T All Bald Eagle nests (3/1 to 6/1)
   Active Bald Eagle nests (3/1 to 6/1)
   Restrict air traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from
   and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to
   treatment for confirmation of dates.
6U Recreation:
   Tent sites (2/1 to 9/15)
6V Anchorages (2/1 to 9/15)
6W Forest Service cabins (2/1 to 9/15)
6X Lodge (2/1 to 9/15)
6Y Special use destination
7Z Subsistence area:
   Salmon harvesting (2/1 to 9/30)
7HH Finfish harvesting
7II Deer harvesting (2/1 to 1/7)
7JJ Invertebrate harvesting
7XX Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
   For Codes 7Z through 7XX contact ADF&G and Chenega Corporation for specific dates, locations, and constraints.
FIELD SHORELINE COMMENT SHEET

SEGMENT St 1 K-98  C0023A  SUBDIVISION: K-9-8-6023A  DATE 4-27-98

USCG
NAME: D.D. Haver Jr
SIGNATURE: D D Haver Jr

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
There are some patches of mousse behind bedrock platforms and are protected from wave energy.  Is not weathering very fast.

ADEC
NAME: Francine J. Beavis
SIGNATURE: Francine J. Beavis

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Manual clean up recommended.  N/S, W/E and T/B.
Patchy mousse saturated sediments among rubble/boulders exist near NW & SE corners of segment, along with st, c, cv. Clean up crew should have SASR maps to treat areas of indicated oil.

LAND MANAGER  NPS
NAME: Will Troyer
SIGNATURE: Will Troyer

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS
Some mousse could be removed with bowls/st boats.
**SHORELINE OILING SUMMARY**

**OG**
- Acton

**BIO**
- USCG
- Land Rep.
- ADEC
- Exxon

**EXXON**
- Avedy
- ADEC
- Exxon

**TEAM NO.**
- 29

**TIDE LEVEL**
- 2:00 to 2:30

**DATE**
- 4/27/90

**EST. SUBDIVISION LENGTH**
- 450 m

**SURFACE DESCRIPTION**
- Sun
- Clouds
- Fog
- Rain
- Snow

**SURVEYED FROM**
- Foot
- Boat
- Helo

**WORKING DIRECTION**
- NW to SE

**SURFACE SECTIONS**
- R %
- U %
- S %
- V %
- P %

**SLOPE**
- Lang %
- Vert %

**OIL CATEGORY LENGTH**
- W C m
- N C m
- VL C m

## SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Pooled</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cover</td>
<td></td>
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<td></td>
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<tr>
<td>Coat</td>
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<tr>
<td>Stain</td>
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<td></td>
</tr>
<tr>
<td>Mousse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patties</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tarballs</td>
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<td></td>
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<tr>
<td>Film</td>
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<td></td>
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<tr>
<td>No Oil</td>
<td></td>
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</tr>
</tbody>
</table>

**Oiled Debris**
- Logs
- Vegetation
- Trash
- Debris

**AMOUNT**
- SM
- MO
- LG

**DID YOU COLLECT DEBRIS?**
- YES
- NO

**PIT PATTERS / TARBALLS**
- Br
- Rw
- Sl
- Tl

**NEAR SHORE SHEEN?**
- NO

**PAVEMENT**
- H F S 0 sq. m by 0 cm

**MATS / BAGS**
- 0

**PHOTOGRAPHS**
- Roll No. ST-20-8
- Frames 21-24

## SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>1</td>
<td>5</td>
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<tr>
<td>2</td>
<td>5</td>
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</tbody>
</table>

**SURFACE SUBSURFACE SEDIMENTS**

**COMMENTS**
Shoreline in a wide rock platform w/ little or no vegetation from the lower unit down and C & B units in the upper unit and Site. The column rock surface in the lower unit apperas to dissipate enough wave energy to inhibit natural sheeting of the oiled area.

Minimum pit depths due to C & B surface subsurface.

**REVIEWED**
- J W
- 5/1/90
SKETCH MAP A

- 30m x 40m medium band in upper V12.
- ST, CT, CU/P+P, MS/P.

LEGEND

1 A
Pit - No Subsurface Oil

2 A
Pit - Subsurface Oil

CT/C
Continuous Distribution

CT/R
Broken Distribution

CT/P
Patchy Distribution

CT/S
Spotshled Distribution

Oil Vegetation

1 oo
Pit location, direction, and number

OIL CHARACTER CODE

AP
PO
CV
CT
ST
MS
PT
TE
FI
NO
SHORELINE ECOLOGICAL SUMMARY

Segment ST/KC-08  Subdivision CD-03A  Date (mo/day/yr) 4/27/90

Time (24 hr) 9:00  Biologist  N. Davis

(A) Substrate type and % of segments:
   (1) Bedrock  40%  (2) Boulder  40%  (3) Cobble  15%  (4) Pebble  3%  (5) Sand  2%  (6) Silt

(B) Overall % cover of biota (% of segment): Dense 80%  Moderate 40%  Low 40% (40%)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low L);
   juveniles / adults (X), new settlement (Q)

BARNACLES Continuous but sparse-moderate

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
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</table>

MYTILUS Small patches between boulders

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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

GASTROPODS Within dense, limpet sparse-moderate, Nucella sparse-rare

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
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</table>

FUCUS Patchy all through the segment

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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
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<td>1L</td>
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<td>6</td>
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</tr>
</tbody>
</table>

Wildlife Observations/ General Comments: Large boulders, cobble and rock outcropping.
   Laminaria, Hesperoiphium, Phaeophyta, Fucus, Corallina, Ulva, Chondrus and
   Sphacelaria green are the most prominent algae. Pavonia sp. common.  
   Ease of Nucella sp. (common) Oil overlies bottom in the upper intertidal.
   Ground truth into oil stain.

Ecological Considerations: Anadromous stream in nearby segment.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UTTZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td><strong>FLORA:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOSELLA/CORALLINA</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>on bedrock, in pools</td>
</tr>
<tr>
<td>CALLIARThRON/CORALLINA</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
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<tr>
<td>CLADOPHORA SPP</td>
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<td>2</td>
<td>2</td>
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<tr>
<td>COSTARIA SPP</td>
<td></td>
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</tr>
<tr>
<td>ENDoclADIA MURICATA</td>
<td>1,2</td>
<td>1</td>
<td>1</td>
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<tr>
<td>FILAMENTOUS GREENS</td>
<td>5</td>
<td>1,2</td>
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<tr>
<td>FILAMENTOUS REDS</td>
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<td>GLOIOPETILS FURCATA</td>
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<td>HALOSACCION GLANDIFORME</td>
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<td>LAMINARIA SPP</td>
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</tr>
<tr>
<td>LITHOTHAMNION</td>
<td></td>
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<tr>
<td>NEROCYSTIS SPP</td>
<td></td>
<td></td>
<td></td>
<td>in drift and off shore</td>
</tr>
<tr>
<td>PORPHYRA SPP</td>
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<td>RALPHSAHILDENBRANDIA</td>
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<td>RHODOMELA LARDX</td>
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<tr>
<td>SCYTOSIPHON SPP</td>
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<td>ULVA SPP</td>
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<tr>
<td>ZOSTERA MARINA</td>
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<tr>
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<td>SERPULIDS</td>
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ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-08-CD-003 SUBDIVISION A (1 of 2)

WORK WINDOW

Manual Pickup       OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest   NO CONSTRAINT. Authorized per memo dated 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to un扰ed biota and substrate.

FOSC

Prepared by Rex P. Coulter

Date 06/11/90

Date 6/13/90
WORK PLAN ADDENDUM

Segment K09-08-CD-003  Subdivision A  Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   - FOSC Request
   - Landowner comments

2. ADJUSTMENT TO WORK PLAN
   - No bioremediation

SHPO APPROVAL NEEDED YES _____  SHPO SIGNATURE _______________________
   NO  X __________

TAG APPROVAL DATE 5/31/90
ADEC  Art Weiner  Art Weiner  DATE 5/31/90
EXXON  Amol Taral  Bad
NOAA  Joseph Sublett  Bad
USCG  G.A. Reiter  G.A. Reiter
SEGMENT ST/K09-08-CD-03 SUBDIVISION B (2 OF 2) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
5T All bald eagle nests (3/1 to 6/1)-Active eagle nests (3/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/14/90

OILING CATEGORIZATION:
Wide 0 m: Medium 62 m: Narrow 534 m: V.Light 38 m: No Oil 0 m
Subsurface Oil Observed: Yes No
Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended
X Treatment Recommended Snare/Absorbent Booms
X Manual Pickup Oil Snares (pom poms)
X Bioremediation Absorbents (pads, rolls, etc)
Tarmat Removal Spot Washing: Wands
Tarmat Removal Beach cleaner
---- Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse patties and 2) bioremediation of areas shown on attached sketch map. Work should be conducted after 6/1 with USFWS approval regarding eagle nest constraint.

TAG COMMENTS:

TAG APPROVAL DATE: 5/12/80
ADEC
EXXON
NOAA
USCG

FOSC: [Signature] DATE: 5/18/90

Remediation limited to areas indicated on map which are clearly on the estuarine zone.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
Salmon stream mouth - spawning (7/15 to 9/15, PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area. (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kukik Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area
Purse seine area
Mainland, west side Kukik, Shuyak & Osprey Bay (6/9 to 10/1)
East side Kukik, East side Afognak (7/4 to 10/1)
Purse seine hook-off
Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

2M Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. Application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calcott 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/kestrel/condor concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothby 267-2205

5T Auk, Bald Eagle nests (3/2 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to nests is limited to 300m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:
Tent sites (3/1 to 9/15)
Anchorage (3/1 to 9/15)
Fishing service cabsins (3/1 to 9/15)
Lodge (3/1 to 9/15)
Special use destination

7Z Subsistence area: Salmon harvesting (3/1 to 9/30)
7H-H Finfish harvesting
7I Deer harvesting (3/1 to 1/7)
7J-Invertebrate harvesting
7K Bear harvesting (4/1 to 5/15 and 10/22 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/1K909 60002R SUBDIVISION: K9-9-CD-23 DATE 4.27.92

JSCG
NAME Diem Tran
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
Small amount of recoverable oil

ADEC
NAME Francine J. Bonifas
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
Manual clean-up recommended with shovels & shovels. Within this segment are several locations having collectable amounts saturated fine sediments in the interstitial spaces of boulders/cobble. 2 main areas:
1) 80 x 40 m area with 35 C 64 MW 42
2) 20 x 20 m area
Other collectable oil exists in places in VETV in easternmost portion of the segment. Clean-up crew should have soil maps & check all areas as indicated.

LAND MANAGER
NAME Will Troyer
SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
Some mousse can be collected with short rod and is dug in between boulder in the main area of mousse concentration on the eastern end of the segment. The very end a few square miles of oil can in fine pebbles that could greatly be improved.
### SHORELINE OILING SUMMARY

**SEGMENT ST/ KCB-CD-3D**

**TEAM NO. 20**  
**TIDE LEVEL** -3.5 to -2.0  
**DATE** 4/27/90

**EST. SUBDIVISION LENGTH:** 111 m

**UPLANDS DESCRIPTION:** Grass

**SURVEYED FROM:** Fooot

**TIME:** 10:11 AM

**SURFACE SEDIMENTS:**

- Asphalt
- Paved

**PAVEMENT H F S** 0 sq. m by 0 cm

**PATTIES / TARBALLS** 0 BAGS

**NEAR SHORE SHEEN?** NO BR RW SL TL

**OILED DEBRIS**  
- Logs
- Vegetation
- Trash
- Debris

**AMOUNT** 0

**DID YOU COLLECT DEBRIS?** YES

**TYPE** 0

**SATELLITES / TARBALLS** 0 BAGS

**Photographs:**

- Roll No. ST-20-9
- Frames 25-30

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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<tr>
<td>TARBALLS</td>
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### SUBSURFACE OIL

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<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATERIAL</th>
<th>OILED DEBRIS</th>
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**COMMENTS**

**REVIEWED**

DATE: 5/1/90

---

**OIL CATEGORY LENGTH:** W 0 m M 0 m N 0 m V 0 m

**SLOPE:** Long % Hang % Vert %

**WAVE EXPOSURE:** Low % Med % High %

**OIL CATEGORY LENGTH:** W 0 m M 0 m N 0 m V 0 m
SHORELINE ECOLOGICAL SUMMARY

Segment ST/19-09 Subdivision CD/031B Date (mo/day/yr) 4/27/90

Time (24 hr) 10:50 Biologist H. Davis

(A) Substrate type and % of segments:
1. Bedrock 40
2. Boulder 40
3. Cobble 10
4. Pebble 6
5. Sand 4
6. Silt -

(B) Overall % cover of biota (% of segment): Dense 20% Moderate 40% Low 40% (40%)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (%), new settlement (%)

BARNACLES Continuous, mostly moderate with sparse areas.

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<thead>
<tr>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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</tr>
<tr>
<td>6</td>
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MYTILUS: Flattish patches between cobble & boulder

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</thead>
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GASTROPODS: Dense littoral, mid, sparse limpets mostly lower areas and underneath

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<tr>
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FUCUS: Patchy all through the segment

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<th>Rare</th>
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Wildlife Observations/General Comments: Rock interspersed boulders and cobble substrate
(L10) laminaria, Halophyllum, Gracilaria tenuata, Cladophora, Alaria, Fucus, Rhodomenia, Rhodomelum, and Craigella (L10) were the most prominent algae seen. Oil was noted, limpets, littorina, and barnacles in some areas via the L10.

Ecological Considerations: 5 Eagle nests. No eagles or nests were seen.
<table>
<thead>
<tr>
<th>FLORA:</th>
<th>SPECIES</th>
<th>UITZ</th>
<th>MITZ</th>
<th>MITZ</th>
<th>LITZ</th>
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<tr>
<td>Buddleja corallina</td>
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<td>on bedrock in pools</td>
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<td>Calliachiron/corallina</td>
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<td>Pycnopodia helianthoides</td>
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</table>
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-08-CD-003 SUBDIVISION B (2 of 2)

WORK WINDOW

| Manual Pickup | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 5T  | Bald Eagle Nest | NO CONSTRAINT. Authorized per memo dated 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon. |

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unaltered biota and substrate.

Prepared by Rex R. Coulter  Date 06/11/90
WORK PLAN ADDENDUM

Segment K09-08-CD-003 Subdivision B Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   • FOSC Request
   • Landowner comments

2. ADJUSTMENT TO WORK PLAN
   • No bioremediation

SHPO APPROVAL NEEDED YES ___ SHPO SIGNATURE _______________________

NO X

TAG APPROVAL DATE 5/31/90
ADEC Art Weiner Art Weiner
EXXON TMZ Art
NOAA Joseph Talbott Joseph Talbott
USCG G.A. Painter G.A. Painter

FOSC Signature 5/31/90
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4LL State Marine Park National Parks
3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unooled biota and substrate.

SHPO SIGNATURE: Charles S. Holm DATE: June 19, 1990

OILING CATEGORIZATION:
Wide 0 m: Medium 75 m: Narrow 0 m: V.Light 620 m: No Oil 1476 m
Subsurface Oil Observed: Yes X No Maximum Depth 5cm

RECOMMENDATIONS:
___ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
___ Tarmat Removal

COMMENTS: Recommend treatment includes 1) manual pick up of accessible mousse deposits, 2) spot wash 3) bioremediated inacessible mousse deposits. Work should be conducted between 7/1 and 7/31 due to pinniped constraints.

TAG COMMENTS: ____________________________________________________________

TAG APPROVAL DATE: 6/16/90 * Bio in upper/super tidal zone only by discretion of ADEC
ADEC ___________________________ ADEC ________________
EXXON ________________ USCG ________________
NOAA ________________ USCG ________________

FOSC: ________________ DATE: ________________
KODIAK ECOLOGICAL CONSTRAINTS

1A. Salmon stream mouth - fry outmigration (4/15 to 7/31)
Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2599

1C. Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D. Kotol Bay Hatchery
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H. Kuskokwim River release
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I. Gill net area.
1J. Purse seine area.
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1K. Purse seine hook-off

1L. Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict boat operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 426-2403

2A. Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unidirectional intertidal and subtidal eelgrass and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 426-2403

3P. Harbor seal and sea lion pupping (6/10 to 7/15)

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 588-7235
ADFG Don Callina 267-2403

5R. Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal and 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 768-3377

5S. Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 768-3377
ADFG Tom Rotky 267-2206

5T. All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 768-3377

5U. Recreation:
Tent sites (5/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destinations

5V. Subsistence area: Salmon harvesting (8/1 to 9/30)

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
MAY-23-1990 17:00 FROM EXXON KODIAK TO 15643771 F.82

FIELD SHORELINE COMMENT SHEET

SEGMENT ST/K1-90 60-7 SUBDIVISION: A DATE 5-21-90

USCG NAME STAN L. SHIELDS SIGNATURE STAN L. SHIELDS

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Comments

If this were the only segment in the Cape Douglas area that had oiling I would recommend no treatment due to amount found in this segment. There are 3 areas that could benefit from manual removal by shovels and shovels. The first two pockets are in the west light part of SEG. With patchy mousse and stain in the upper middle tide zone and the 3rd pocket is in the eastern part of SEG. in the upper tide zone again with light mousse and stain.

ADEC NAME FRANCIS J. BENT SIGNATURE FRANCIS J. BENT

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Comments

Manual pick-up with shovels & shovels recommended.

Three areas of mousse & mousse saturated fine sediments exist along this segment, each being with medium wave energy:

1) 10 m x 50 m band among cobble/boulder, western part of segment
2) 2 m x 5 m band slightly to the east of this
3) 2 m x 3 m area of some mousse in coarse gravel among cobble/boulders in eastern portion of segment.

All as described is recoverable by manual retrieval methods. See SS map for exact location.

LAND MANAGER NAME ______________________ SIGNATURE ______________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Comments

Not available
USCG
NAME
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

Manual Pick-up with shovel & trowel recommended.

Three areas of measure & measure extended fine sediments exist along this segment, both being with medium wave energy.

1) 10 m X 50 m and away from trash/boulders, eastern part of segment.
2) 2 m X 5 m and slightly to the east of this.
3) 2 m X 3 m area of some accumulations of coarse gravel among trash/boulders in eastern portion of segment.

All oil described is recoverable by manual retrieval methods. See above for your location.

LAND MANAGER
NAME
SIGNATURE

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS
Not present during assessment.

Concern with ADEC recommendation. Recoverable oil is primarily in the three pockets/patches indicated on the sketch map. Recommend having IRS/ADEC monitor locate these difficult to find areas.
**SHORELINE OILING SUMMARY**

**On:** Mike Fogy  
**USCG:** Stan Shields  
**SEGMENT ST:** Koq 09 / CV 007  

**Bi:** Heather Davis  
**LAND REP** Sue Brown/ Jon Bond  
**SUBDIVISION:** A  
**EXXON:** ADEC Fran Dennis  
**TIME:** 16:27 to 18:30  

**TEAM NO.: 20**  
**TIDE LEVEL:** 1.2  
**DATE:** 5/1/90  
**EST. SUBDIVISION LENGTH:** 2.117 m  
**UPLANDS DESCRIPTION:**  
- Grass  
- Forest  
- Rock  
- Moist  
- Rocky  
- Backshore  

**SURVEYED FROM:** 
- Foot  
- Boat  
- Helo  
**WORKING DIRECTION:** W to E  
**SURFACE SEDIMENTS:**  
- R: 5%  
- B: 40%  
- C: 30%  
- P: 10%  
- G: 5%  
- S: 10%  
- M: 0%  
- O: 0%  

**SLOPE:**  
- L: 100%  
- H: 0%  
- V: 0%  

**WAVE EXPOSURE:**  
- L: Low  
- M: Med  
- H: High  

**OIL CATEGORY LENGTH:**  
- W: 0 m  
- M: 75 m  
- N: 0 m  
- V: 635 m  
- L: 1407 m  

### SURFACE OIL

<table>
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<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>Asphalt</td>
<td>X</td>
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<tr>
<td>Pavement</td>
<td>X</td>
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<td>X</td>
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<tr>
<td>POOLED</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
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</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOSS</td>
<td>X</td>
<td>X</td>
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<tr>
<td>TARBALLS</td>
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<tr>
<td>FILM</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>NO OIL</td>
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</table>

**PAVEMENT:** H F 3.0 sq. m by 0 cm  
**PATTIES / TARBALLS:** 30 BAGS  
**NEAR SHORE SHEEN:** No  
**BR RW SL TL:**  
**OILED DEBRIS:**  
- Logs  
- Vegetation  
- Trash  
- Debris  

**DID YOU COLLECT DEBRIS?**  
- Yes  
- No  

**TYPE:**  
- O  

**BAGS:** 0  

**Photographs:**  
- Roll No.: ST-20-12  
- Frames: 22-27

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIS INTERVAL</th>
<th>OILED DEBRIS BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANALYSIS QUANTITY</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
</table>
| 1       | 20            | X                        | X                     | X                  | X                | X        | -                 | P.G.S  
| 2       | 30            | X                        | X                     | X                  | X                | X        | 25                | P.G.S.P  
| 3       | 30            | X                        | X                     | X                  | X                | X        | -                 | C.P.S.P  
| 4       | 25            | X                        | X                     | X                  | X                | X        | -                 | C.P.S.P  
| 5       | 15            | X                        | X                     | X                  | X                | X        | 10                | C.S  
| 6       | 15            | X                        | X                     | X                  | X                | X        | N                 | S.C  

**COMMENTS**  
Shore zone is a rocky headland with a Boulder/Cobble beach zone.  
It is low angle, most of the oiling occurs as running in the HITZ.  
The most common distribution of Mousse in the HITZ toward the west end of the segment.  
There is a Rock Bench to the west of the patch and a Point to the east.  
The mousse is in granule/sand in between Boulder/Cobb.
# Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEET (Y/N)</th>
<th>SURFACE - SUBSURFACE SEDIMENTS</th>
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<tr>
<td>7</td>
<td>20</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>N</td>
<td>15</td>
<td>G, S</td>
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<tr>
<td>8</td>
<td>40</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>G, S</td>
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<tr>
<td>9</td>
<td>30</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>S, C</td>
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<tr>
<td>10</td>
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<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>S, P</td>
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</tbody>
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**Comments**

The eastern end of the segment in a pocket bench in the Sula Itz.
**SHORELINE ECOLOGICAL SUMMARY**

Segment S1/K09-09 Subdivision CD-07 Date (mo/day/yr) 5/21/90

Date (mo/day) 5/21/90 Biological N. Davis

(A) Substrate type and % of segments:

<table>
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<tr>
<th>Substrate Type</th>
<th>% Segments</th>
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<tbody>
<tr>
<td>Bedrock</td>
<td>5%</td>
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<tr>
<td>Boulder</td>
<td>40%</td>
</tr>
<tr>
<td>Cobble</td>
<td>30%</td>
</tr>
<tr>
<td>Pebble</td>
<td>15%</td>
</tr>
<tr>
<td>Sand</td>
<td>10%</td>
</tr>
<tr>
<td>Surf</td>
<td>5%</td>
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</table>

(B) Overall % cover of biota (% of segment): Dense 10% Moderate 40% Low 50% (30%)

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low L); juveniles/adults (J) "new settlement (S)

Photographs: Roll No. ST - 20 - 12 Frames 28 - 27

**BARNACLES** Variable in density but continuous along the segment

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
<td></td>
<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
</tr>
<tr>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

**MYTILUS** Rare. Just a few in the segment.

<table>
<thead>
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<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tbody>
<tr>
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<td>1U</td>
<td>1M</td>
<td>1L</td>
<td>1U</td>
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<tr>
<td></td>
<td>X</td>
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**GASTROPODS** Variable in density, but continuous.

<table>
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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tr>
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**FUCUS** Patchy

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*Ecological Considerations: No Ecological Constraints. Eagles in the area. No nests observed. Dead Eagle found. Harbor seals hand out and pup in the area.

Bugs seen in area: Dead eagle, Wandering Tattler, Black Scoters, Harlequin Ducks and Glaccon Swallowed Gulls.
SHORELINE EVALUATION

SEGMENT ST/ K09-09-CD-08 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/15/90

OILING CATEGORIZATION:

Wide 0 m: Medium 97 m: Narrow 20 m: V.Light 651 m: No Oil 140 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ______

RECOMMENDATIONS:

_____ No Treatment Recommended

X Treatment Recommended

_____ Manual Pickup

X Bioremediation 6/9 5/13/90

_____ Tar mat Removal

COMMENTS: Recommended treatment activities include 1) manual pickup of mousse and 2) bioremediation of areas as indicated on attached sketch map. No specific ecological time constraints identified.

TAG COMMENTS: Monitor to assess logs

TAG APPROVAL DATE: 5/15/90

ADEC Art Wadsworth

EXXON [Signature] DATE: 5/20/90

NOAA [Signature] Monitors unsure bioremediation treatment

USCG [Signature] is clearly on the intertidal zone, below-mean high tide line.
1A Salmon stream mouth - try outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit issuance.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kodiak Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1E Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1F Gill net area

1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olg Bay (6/9 to 10/1)
East side Kodiak, East side Mognak (7/4 to 10/1)

1K Purse seine hook-off

1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

2M Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3A Harbor seal and sea lion pupping (5/10 to 7/1)

3B Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).
Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Roth 267-2206

5T All Bald Eagle nests (5/1 to 8/1)
Active Bald Eagle nests (6/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
7HH Finfish harvesting
7I Deer harvesting (6/1 to 7/7)
7J Interlake harvesting
7K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
SEGMENT ST 1 K09-09   SUBDIVISION:  C00084   DATE 4/27/90

NAME  John Naughton   SIGNATURE  John J. Naughton

☑ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS

The segment at Cape Douglas had very little oil over majority of length, with two areas containing small amounts of patchy mousse. Recommend this small amount of oil be allowed to weather naturally.

ADEC NAME  Terry Ellsworth   SIGNATURE  Terry Ellsworth

☑ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS

I concur with National Park Service's conclusions and recommend that the removal of the mousse and oiled debris be accomplished by manual methods.

LAND MANAGER

NAME  Carl Schoch   SIGNATURE  Carl Schoch

☑ NO TREATMENT RECOMMENDED   ☐ TREATMENT SUGGESTED

COMMENTS

There are three areas of recoverable oil, mostly mousse in interstitial spaces. The entire segment should be walked by a cleanup crew and all recoverable mousse and oiled debris should be removed.
**SURFACE OIL**

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<th>CHARACTER</th>
<th>DISTRIBUTION</th>
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**OIL CATEGORY LENGTH:** W 0 m M 60 m N 20 m V 673 m NO 126 m

**PAVEMENT:** F S, NONE sq. m by 0 cm

**PATTIES/TARBALLS:** NONE BAGS

**NEAR SHORE SHEEN?** NO BR RW SL TL

**OILED DEBRIS AMOUNT DID YOU COLLECT DEBRIS?**
- Logs X
- Vegetation
- Trash
- Debris

**PHOTOGRAPHS:**
- Roll No. ST-19-18
- Frames 23-27

**SUBSURFACE OIL**

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**COMMENTS:**

This segment is located at the north-facing shore of Skoal Bay. The very light oil characterizes most of the segment with sporadic patches of stain and coat.

Reviewed by: [Signature] Date: 1 May 90
SHORELINE ECOLOGICAL SUMMARY

Segment ST/K-9-9.4-2 Subdivision A

Date (mo/day/yr) 4-27-90

Biont R. M. McCormick

Time (24 hr) 0850-0850

A) Substrate type and % of segments:
   (1) Bedrock 15% (2) Boulder 75% (3) Cobble 10% (4) Pebble 0 (5) Sand 0 (6) Silt 0

B) Overall % cover of biota (% of segment): Dense 20%; Moderate 50%; Low 30%

C) Density, substrate preference (by number from A, above), &
   vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
   juveniles/adults (X), new settlement (3)

BARNACLES

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Wildlife Observations/ General Comments: No small mammals seen in the segment. Littorines dominate intertidal community.

Ecological Considerations: NOAA data suggests eagle nest located in this segment. None were observed. No anomalous streams; therefore no ECO map is included in this report.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT KO9-09-CD-008 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| ST | Bald Eagle Nest | NO CONSTRAINT. Authorized per memo dated 6/10/90 from Mary Portner/USFWS to Rex Coulter/Exxon. |

OTHER ECOLOGICAL CONSIDERATIONS
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

Prepared by Rex R. Coulter Date 6/10/90
WORK PLAN ADDENDUM

Segment K09-09-CD-008  Subdivision A  Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   • FOSC Request
   • Landowner comments

2. ADJUSTMENT TO WORK PLAN
   • No bioremediation

SHPO APPROVAL NEEDED YES    NO  X

TAG APPROVAL DATE 5/31/90

ADEC Art Weiner Art Weiner
EXXON Art Weiner Art Weiner
NOAA Joseph Talbott Joe Talbott
USCG G.A. Reiter G.A. Reiter
SHORELINE EVALUATION

SEGMENT ST/ K09-09-CD-09 SUBDIVISION A (1 OF 1) DATE 4/27/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: 
DATE: 5/14/90

OILING CATEGORIZATION:

Wide _0_ m: Medium _120_ m: Narrow _142_ m: V.Light _643_ m: No Oil _0_ m
Subsurface Oil Observed: Yes _X_ No _No__ Maximum Depth _10 cm_

RECOMMENDATIONS:

_____ No Treatment Recommended  _____ Snare/Absorbent Booms
_____ Treatment Recommended  _____ Oil Snares (pom poms)
____ X Manual Pickup  _____ Absorbents (pads, rolls, etc)
____ X Bioremediation  _____ Spot Washing: _____ Wands
_____ Tarmat Removal  _____ Beach Cleaner
_____ Other (see comments)  _____ Other

COMMENTS: Recommended treatment includes manual pickup of mousse patties in areas indicated on sketch map. No specific working time constraints.

TAG COMMENTS: 
Bioremediate AREAS OF COAT INDICATED ON SKETCH

TAG APPROVAL DATE: 5/12/90
ADEC Artucker Artucker
EXXON Anna Lee Anna Lee
NOAA Gary Peterson Gary Peterson
USCG D.D. Rome D.D. Rome

FOSC: DATE: 5/16/90
KODIAK ECOLOGICAL CONSTRAINTS

1A. Salmon stream mouth - fry outmigration (4/15 to 7/31)

1B. Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C. Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D. Kotze Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H. Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I. Gill net area

1J. Purse seine area

Mainland, West side Kodiak, Shuyak & Moser/Olg Bay (6/8 to 10/1)

East side Kodiak, East side Afognak (7/4 to 10/1)

1K. Purse seine hook-off

1L. Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (11) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

2M. Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unladen intertidal and subtidal algal and seagrass. If plans for treatment include methods such as hot water wash or in situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3P. Harbor seal and sea lion pupping (5/10 to 7/1)

3Q. Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in situ within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S. Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Rothby 267-2208

5T. All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U. Recreation: Tent sites (6/1 to 9/15)

6V. Anchorage (6/1 to 10/15)

6W. Forest Service cabins (6/1 to 10/15)

6X. Lodge (6/1 to 9/15)

6Y. Special use destination

7Z. Subsistence area: Salmon harvesting (6/1 to 9/30)

7HH. Finfish harvesting

7L. Deer harvesting (6/1 to 1/7)

7U. Invertebrate harvesting

7K. Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in situ which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2250
This segment mostly light oil with a few areas toward end, medium patches of mouse. This area can be cleaned by manual removal - some of patches were at least 10 cm deep. Recommended treatment in these few localized areas.

Interstitial mousse/sediment occurs along most of the segment with 6 more concentrated areas. I recommend manual removal of the mousse/sediment and oiled debris.

Recoverable oil is mostly interstitial mousse and occasional mousse patties up to 1x1 m. Segment should be walked by cleanup crew and recoverable oil removed. Oiled debris should also be removed. Oiled logs cannot be removed or burned.
**EXXON**

**[Extracted Text]**

---

**TEAM NO.** 19

**TIDE LEVEL** T+9 TO T-2.0

**DATE** 4/27/90

**PLANTS DESCRIPTION:** Sun [ ] Clouds [ ] Fog [ ] Rain [ ] Snow

**URVEYED FROM:** [ ] Foot [ ] Boat [ ] Helo

**WORKING DIRECTION:** North to South

**SURFACE SEDIMENTS:**
- 35% Grass
- 30% Forest
- 20% Rock

**SURFACE OIL**

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<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**OIL CATEGORY LENGTH:**
- W 0 m
- M 130 m
- N 120 m

**SUBSURFACE OIL**

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</tbody>
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**COMMENTS**

The entire segment is characterized by oil ranging from very light, which consists of occasional streaks on sidewalks, narrow to medium concentrations exist at area elongated areas along the segment.

**REVIEWED ______ DATE ______**
### SHORELINE ECOLOGICAL SUMMARY

<table>
<thead>
<tr>
<th>Segment ST</th>
<th>K2-3-2A-9</th>
<th>Subdivision</th>
<th>A</th>
<th>Date (mo/day/yr)</th>
<th>4-27-90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time (24 hr)</td>
<td>0830-0922</td>
<td>Biologist</td>
<td>D. M. McCormick</td>
<td></td>
<td></td>
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</table>

(A) Substrate type and % of segments:
1. Bedrock 15%
2. Boulder 20%
3. Cobble 5%
4. Pebble 10%
5. Sand 15%
6. Silt 0%

(B) Overall % cover of biota (% of segment):
- Dense 30%
- Moderate 50%
- Low 20%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- Upper (U): mid (M); low tidal (L).
- Juveniles/adults (X), new settlement (3).

#### BARNACLES

<table>
<thead>
<tr>
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<th>Rare</th>
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#### FUCUS

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</table>

Wildlife Observations/General Comments:
- One eagle overhead - probably same individual observed on yesterday's survey. Littorine snails dominate intertidal community.

Ecological Considerations:
- No eagle nests, seabird colonies, or anadromous streams; therefore no ECO map is included in this report.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UTZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>COMMENTS</th>
</tr>
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<tr>
<td><em>Bosokia/corallina</em></td>
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<td><em>Calliarthon/corallina</em></td>
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<tr>
<td><em>Cladophora</em> SPP</td>
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<tr>
<td><em>Costaria</em> SPP</td>
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<tr>
<td><em>Endocladium mucicata</em></td>
<td>2.3</td>
<td>1.3</td>
<td>otre in lower ITZ</td>
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<tr>
<td><em>Filamentous greens</em></td>
<td></td>
<td></td>
<td>2.3</td>
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<tr>
<td><em>Filamentous reds</em></td>
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<td><em>Gloioptilus furcata</em></td>
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<td><em>Halosaccion fladiforme</em></td>
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<td><em>Laminaria</em> SPP</td>
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<td><em>Lithothamnion</em></td>
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<td><em>Porphyra</em> SPP</td>
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<tr>
<td><em>Rals sia/hildenbrandia</em></td>
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<td><em>Rhodomela larvae</em></td>
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<tr>
<td><em>Bryoan</em></td>
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<tr>
<td><em>Chiton</em> (other than K. tunicata)</td>
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<tr>
<td><em>Clams</em></td>
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<tr>
<td><em>Crabs</em></td>
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<td><em>Dermasterias imbricata</em></td>
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ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-09-CD-009 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup   OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unrolled biota and substrate.

FOSC Date 6/29/80
Prepared by 9/23/80
WORK PLAN ADDENDUM

Segment K09-09-CD-009  Subdivision A  Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   • FOSC Request
   • Landowner comments

2. ADJUSTMENT TO WORK PLAN
   • No bioremediation

SHPO APPROVAL NEEDED YES _____  SHPO SIGNATURE __________________________
   NO _____

TAG APPROVAL DATE 5/31/90
ADEC Art Weiss  Art Weiss
EXXON Arlen ___
NOAA Joseph Talbott  John ______
USCG C.A. Reiter  C.A. Reiter

FOSC  ______  DATE 5/22/90
ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony Closed to all activities; work site is less than 800m from seabird colony. Seabird colony location as per letter to Rex Coulter/Exxon from Walter Stieglitz/USFWS on 6/15/90.

OTHER ECOLOGICAL CONSIDERATIONS

If seabird colony constraint is removed, other ecological considerations will apply.
ECOLOGY MAP
SEGMENT K9N-9 CD-9
SUBDIVISION A ( _ of _ )

SEABIRD COLONY
ACTIVE EAGLE NEST
INACTIVE EAGLE NEST

1 inch = 1280 feet

Exxon Company, USA
Map Key: MK-CD-9
June 10, 1990
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K9-10-CD-10 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup

OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony

No constraint to manual pickup as per conversation from Dan Hamson/NPS to Rex Coulter/Exxon on 6/13/90.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict all activity to essential minimum, especially air traffic. Avoid any unnecessary disturbance or damage to unoi giving biota and substrate.

FOSC

Date 6/14/90

Prepared by Rex Coulter Date 06/13/90
ECOLOGY MAP
SEGMENT K9N-10 CD-10
SUBDIVISION ___ (___ of ___)
METERS

- Seabird Colony
- Active Eagle Nest
- Inactive Eagle Nest
SEGMENT ST/ K02-10-CD-11 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park
91M Land Mammals
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: ___________________________ DATE: 5/8/90

OILING CATEGORIZATION:
Wide 0 m: Medium 82 m: Narrow 0 m: V.Light 505 m: No Oil 116 m
Subsurface Oil Observed: Yes X No Maximum Depth 7 cm

RECOMMENDATIONS:
--- No Treatment Recommended
--- Treatment Recommended
--- Manual Pickup
--- Bioremediation
--- Tarmat Removal
--- Snare/Absorbent Booms
--- Oil Snares (pom poms)
--- Absorbents (pads, rolls, etc)
--- Spot Washing: Wands
--- Beach Cleaner
--- Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse followed by 2) bioremediation in areas indicated on sketch map. No specific working time constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90
ADEC ___________________________ DATE: 5/12/90
EXXON ___________________________
NOAA ___________________________
USCG ___________________________

I'm pol not approved, not rep to go on scene. Special use permit required.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration  (4/15 to 7/31)
1B Salmon stream mouth - spawning  (7/15 to 6/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area  (4/21 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kukak Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1K Purse seine hook-off

1L Set net area
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

2M Herring spawning  (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncleared intertidal and subtidal alga and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3 Harbor seal and sea lion pupping  (6/10 to 7/1)
3 Harbor seal and sea lion molting  (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance fom haulouts. No application of lnipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calcina 267-2403

5R Seabird colony  (6/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/brant/butang concentration  (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rooby 267-2206

5T All Bald Eagle nests  (3/1 to 6/1)
Active Bald Eagle nests  (3/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation: Tent sites  (6/1 to 9/15)
6V Tent exchanges  (6/1 to 9/15)
6W Forest Service cabins  (6/1 to 9/15)
6X Lodge  (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting  (6/1 to 9/30)
7Z.1 Fish harvesting
7Z.2 Deer harvesting  (6/1 to 1/7)
7Z.3 Invertebrate harvesting
7Z.4 Bear harvesting  (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or lnipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2355
FIELD SHORELINE COMMENT SHEET

EYMENT STK100910 - CD011 SUBDIVISION: CD011A DATE 4/26/90

NAME John Naughton SIGNATURE

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

Majority of segment had very light oil except for one area in the north end of the segment. This area contained patches of mousse which could be removed and recommend that area be the only one treated.

ADEC NAME Terry Elsworth SIGNATURE

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

I agree with National Park Service's observations and recommend manual removal of the mousse and cover this segment.

LAND MANAGER NAME Earl Schack SIGNATURE

NO TREATMENT RECOMMENDED TREATMENT SUGGESTED

COMMENTS

Recoverable mousse was found within the first 150 m of the north end of this segment, and with the last 100 m of the south end of this segment. Spatters of mousse were found over a 200 m area at the west shore of this segment.
### SHORELINE OILING SUMMARY

**SEGMENT**: SEGMENT ST.  K0910 - C0011

**TEAM NO.**: 19

**TIDE LEVEL**: 3.07 to 3.70

**DATE**: 4/12/00

**ST. SUBDIVISION LENGTH**: 638 m

**UPLANDS DESCRIPTION**: Sun [Clouds [Fog [Rain [Snow](null)

**SURVEYED FROM**: Foot

**SURFACE SEDIMENTS**: R % B % C % P % G % S % M % V %

**SLOPE**: Lang % Hang % Var %

**WAVE EXPOSURE**: Low [Med [High

**OIL CATEGORY LENGTH**: W 0 m M 55 m N 0 m V 300 m NO 283 m

### SURFACE OIL

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<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
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<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>STAIN</td>
<td>X, X</td>
<td>X</td>
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</tr>
<tr>
<td>MOUSSE</td>
<td>K, K, K</td>
<td>K</td>
<td>X, X, X</td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### OILED DEBRIS

- Logs
- Vegetation
- Trash
- Debris

### NEAR SHORE SHEEN?

- 0 [BR RW SL]

### OIL AMOUNT

- SM
- MD
- LG

### DID YOU COLLECT DEBRIS?

- YES [NO]

### PAVEMENT H F S

- NONE

### PATTIES / TARBALLS

- NONE

### BAGS

- 0

### PHOTOGRAPHS

- Roll No. ST-19-18
- Frames 4-10

### SUBSURFACE OIL

<table>
<thead>
<tr>
<th>Pit NC</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil / Film Color</th>
<th>Pit Zone</th>
<th>Anaerobic Sediments</th>
<th>Surface Subsurface Sediments</th>
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<tbody>
<tr>
<td>1-9</td>
<td></td>
<td>X</td>
<td>0.7</td>
<td>X</td>
<td>N</td>
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**COMMENTS**:

- NORTH END OF SEGMENT HAS MEDIUM DISTRIBUTION OF OIL OVER 2 MAJOR AREAS - SEE SKETCH
- THE BAYHEAD AND SOUTH-FACING SHORE HAVE A GRADUALLY DISTRIBUTION - SEE SKETCH
- AN AREA WITH THE NORTH-FACING SHORE HAD A MEDIUM AREA OF OIL AND A 3X7 AREA OF MOUSSE TO A 7cm DEPTH

**REVIEWED**: [Signature] DATE 4-28-00
SHORELINE ECOLOGICAL SUMMARY

Segment ST / K-9-10-68-11 Subdivision A Date (mo/day/yr) 4-26-90

Time (24 hr) 0915-1005 Biologist D. McCormick

(A) Substrate type and % of segments:
(1) Bedrock 30 (2) Boulder 30 (3) Cobbles 30 (4) Pebbles 18 (5) Sand 12 (6) Silt

(B) Overall % cover of biota (% of segment): Dense 20% Moderate 60% Low 20%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low-L;)
juveniles / adults (X), new settlement (G)

Wildlife Observations/General Comments: Oystercatchers were only birds noted.

Ecological Considerations: No anadromous streams in this segment. NOAA data suggests seabird colony (ii) in this segment, although none are shown on USFWS maps and none were observed. No eagles seen. No ECO map is included in the report.
<table>
<thead>
<tr>
<th>SPECIES</th>
<th>UITZ</th>
<th>MITZ</th>
<th>LITZ</th>
<th>COMMENTS</th>
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<tr>
<td>BOSSTELLA CORALLINA</td>
<td></td>
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<tr>
<td>CALLIARThRON CORALLINA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLADOPHORA SPP</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>COSTARIA SPP</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ENDOCLADIA MURICATA</td>
<td>1</td>
<td>1,2</td>
<td></td>
<td>Ant-tidal pools</td>
</tr>
<tr>
<td>FILMENTOUS GREENS</td>
<td></td>
<td></td>
<td>2</td>
<td>Continuous soft现任</td>
</tr>
<tr>
<td>FILMENTOUS REDS</td>
<td></td>
<td></td>
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<td>GLOIOPELTIS FURCATA</td>
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<tr>
<td>HADDONAClON GLANDIFORME</td>
<td>1</td>
<td>1,2</td>
<td>3</td>
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<tr>
<td>LAMINARIA SPP</td>
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<td></td>
<td>1,2,3</td>
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<td>LITHOTHAMNION</td>
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<td>NEREOCYSTIS SPP</td>
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<td>PORPHYRA SPP</td>
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<td>RHAPHSIA/HILDENBRANDIA</td>
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<td>RHODOMELA LARIX</td>
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<td>RHONOMENIA PALMATA</td>
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<td>SCYTOSIPHON SPP</td>
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<td>ULVA SPP</td>
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<td>ZOSTER MARINA</td>
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<td>Filicinae, pie K</td>
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<td>1,2</td>
<td>3</td>
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<td>Incidens e</td>
<td>2,3</td>
<td>2</td>
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<tr>
<td>Verucaria</td>
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**FLORA:**

**FAUNA:**

<table>
<thead>
<tr>
<th>(SEMI) BALUNUS CARUSUS</th>
<th>1,2-1,3</th>
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<tbody>
<tr>
<td>B. GLANDULA</td>
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</tr>
<tr>
<td>BRYZOANS</td>
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</tr>
<tr>
<td>CHITONS (other than K. TUNICATA)</td>
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<tr>
<td>CLAMS</td>
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<td>CRABS</td>
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<td>DERMASTERIAS DURICATA</td>
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<td>KATHARINA TUNICATA</td>
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<tr>
<td>LEPTASTERIAS HEXACTIS</td>
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<td>LIMPETS</td>
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<td>PISASTER OCHRECEUS</td>
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<td>PUCNOPODIA HELIANNOIDES</td>
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<td>SEARLESIA DIREA</td>
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<tr>
<td>SERPELIDS</td>
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</tr>
<tr>
<td>SIFHONARIA THERSITES</td>
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<tr>
<td>TEALIA</td>
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</tr>
</tbody>
</table>
XXX Wide
/// Medium
---- Narrow
TTTT Very Light

Map Key: GOA-31
Name: LINCOLN NAVAS
Date: 4/2/90
Data Entered:
SHORELINE EVALUATION

SEGMENT ST/ K9-10-CQ-12  SUBDIVISION A (1 OF 1) DATE  4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park
9LM  Land Mammals
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE:  [Signature]
DATE:  5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 0.1 m: No Oil 216 m
Subsurface Oil Observed:  Yes  No

RECOMMENDATIONS:

--- No Treatment Recommended
--- Snare/Absorbent Booms
X Treatment Recommended
--- Oil Snares (pom poms)
X Manual Pickup
--- Absorbents (pads,rolls,etc)
--- Bioremediation
--- Spot Washing: Wands
--- Tarmat Removal
--- Beach Cleaner
--- Absorbents (pads,rolls,etc)
--- Oil Snares (pom poms)
--- Manual Pickup
--- Bioremediation
--- Tarmat Removal
--- Other (see comments)

COMMENTS:  Recommended treatment includes manual pickup of mousse. No specific working time constraints.

TAG COMMENTS:

TAG APPROVAL DATE:  5/14/90
ADEC  [Signature]  DATE:  5/12/90
EXXON  [Signature]  NPS Rep to be on scene. Special use permit required.
NOAA  [Signature]  USCG  [Signature]
FOSC:  [Signature]
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1 K09 10-0002 SUBDIVISION: C0012A DATE 4/26/90

NOAA
NAME John Naughton SIGNATURE John J. Naughton

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
This segment at Cape Douglas had very light oil, mainly splatters of stain, east and a little mousse. Recommend no treatments. High resource area - observed fox, otter, seals.

ADEC
NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
As well as the two small areas of mousse at the southern and northern ends of the segment, sporadic mousse adjacent to cobbles and small boulders occurs in an area 1 x 30m north of the southern segment boundary. Manual removal is recommended.

LAND MANAGER
NAME Carl Schock SIGNATURE Carl Schock

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS
Recoverable mousse was found in 2 small patches 2 x 2 m at the northern end and 1 x 1 m at the southern end.
**SHORELINE OILING SUMMARY**

**SEGMENT ST: K0910-C012**

OG_Lincoln_McCormick_USS(Deer_Town_Naucet) SUBDIVISION SD012A (LOI)

**SEAM NO. /4**

TIDE LEVEL: -8.7 to -2.4 ft DATE: 6/26/19

**EST. SUBDIVISION LENGTH: 1124 m**

**UPLAND DESCRIPTION: Grass, Rock**

**SURVEYED FROM:** Foot

**WORKING DIRECTION:** North to South

**SURFACE SEDIMENTS:**

- R: 10%
- B: 70%
- C: 10%
- P: 5%
- G: 3%
- S: 2%
- M: 0%
- V: 0%
- O: 0%

**SLOPE:**

- Lang: 0%
- Hang: 0%
- Vert: 0%

**WAVE EXPOSURE:**

- Low
- Med
- High

**OIL CATEGORY LENGTH:**

- W: 0 m
- M: 0 m
- P: 0 m
- N: 0 m
- V: 9/4 m
- L: 2/0 m

## SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>COVER</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>COAT</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>STAIN</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>MOUSSE</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

**PAVEMENT**

- H: 0
- F: 0
- S: 0
- A: 0
- M: 0
- N: 0
- V: 0
- L: 0

**PATTIES/TARBALLS:**

- A: 0
- M: 0
- N: 0
- V: 0
- L: 0

**NEAR SHORE SHEEN?**

- NO
- BR
- RW
- SL
- TL

**OILED DEBRIS**

- Logs
- Vegetation
- Trash
- Debris

**AMOUNT**

- SM
- MD
- LG

**DID YOU COLLECT DEBRIS?**

- YES
- NO

**TYPE**

- SAGS
- 0

**PHOTOGRAPHER:**

- Roll No.: SJ-19-18
- Frames: 11-13

## SUBSURFACE OIL

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW</th>
<th>OIL/FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANALYSIS</th>
<th>SHEET</th>
<th>SURFACE-SUBSURFACE SEDIMENTS</th>
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</thead>
<tbody>
<tr>
<td><em>1</em></td>
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<td>N</td>
<td>N</td>
<td>P/c/6/5</td>
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<td>2</td>
<td>20</td>
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<td>N</td>
<td>N</td>
<td>P/G</td>
</tr>
<tr>
<td><em>3</em></td>
<td>10</td>
<td>X</td>
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<td>X</td>
<td>X</td>
<td>N</td>
<td>N</td>
<td>P/G</td>
</tr>
</tbody>
</table>

**COMMENTS**

- AREA LANDWASHED OR POND POOL (SEE SKETCH) was not oiled

- Oiled intervals of less than 5 cm in Pits 1 & 3 do not constitute subsurface oil.

**REVIEWED**

- DATE: 4-29-16
SHORELINE ECOLOGICAL SUMMARY

Segment ST/CA-10-CN-12. Subdivision A. Date (mo/day/yr) 4-26-90

Time (24 hr) 1010-1050 Biologist D. McCormick

(A) Substrate type and % of segments:
1. Bedrock 10
2. Boulder 70
3. Cobble 10
4. Pebble 8
5. Sand 2

(B) Overall % cover of biota (% of segment):
1. Dense 30%
2. Moderate 50%
3. Low 20%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
1. Juveniles/adults (X), new settlement (3)

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<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
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<tr>
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BARNACLES

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MYTILUS

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GASTROPODS

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FUCUS

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</tbody>
</table>

Wildlife Observations/General Comments: Red foxes, Sea lions offshore, 1 seal, otter, Black scoters, 2-30-40 harbor seals, gulls.

Ecological Considerations: According to NOAA, seabird colonies (ies) are present in this segment. No specific locations are given on USFWS resource maps. No marine mammals were seen. No anadromous streams are located in this segment. There are no eagles. Therefore, an ECO map is not included in this report.
### Flora:

<table>
<thead>
<tr>
<th>Species</th>
<th>Unit 1</th>
<th>Unit 2</th>
<th>Unit 3</th>
<th>Comments</th>
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<tbody>
<tr>
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<tr>
<td>Callianthus / Corallina</td>
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<td>Bryozoaans</td>
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ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K9-10-CD-12 SUBDIVISION A (1 of 1)

WORK WINDOW

Manual Pickup         OPEN

NPS Rep. To Be Present During Treatment

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony No constraint to manual pickup as per conversation from Dan Hamson/NPS to Rex Coulter/Exxon on 6/13/90.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict all activity to essential minimum, especially air traffic. Avoid any unnecessary disturbance or damage to unaltered biota and substrate.

Prepared by Rex R. Coulter Date 06-13-90
SHORELINE EVALUATION

SEGMENT ST/K9-10-CD-13 SUBDIVISION A (1 OF 1) DATE: 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 0 m: Narrow 29 m: V.Light 384 m: No Oil 956 m
Subsurface Oil Observed: Yes X No

MAXIMUM DEPTH

RECOMMENDATIONS:

X No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
X Tarmat Removal

X Snare/Absorbent Booms
X Oil Snare (pom poms)
X Absorbents (pads, rolls, etc)
X Spot Washing: Wands
X Beach Cleaner
X Other (see comments)

COMMENTS: Recommended treatment includes manual removal of mousse patch in area indicated on sketch map. No specific working time constraints.

TAG COMMENTS:

TAG APPROVAL DATE: 5/8/90

ADEC
EXXON
NOAA
USCG

FILE CHECK: DATE: 5-12-90

Cleaning activity restricted to mousse patch indicated on field sketch. No contact with birds or nests within ½ mile. Check with USFWS to determine status of nest.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/15; PEAK 8/15)
No disturbance of stream beds or banks unless authorized by ADF & G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF & G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF & G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF & G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF & G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF & G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF & G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF & G Larry Peltz 424-3214

1D Kodiac Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF & G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF & G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF & G Larry Peltz 424-3214

1I Gill net areas
1J Purse seine areas.
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
1L Set net sites
Contact ADF & G for confirmation. Dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF & G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF & G for consultation and authorization.

AGENCY CONTACT PERSON: ADF & G Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)
Contact ADF & G for confirmation. Dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unplied intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF & G for consultation and authorization.

AGENCY CONTACT PERSON: ADF & G Larry Nicholson 486-4791

3N 3P Harbor seal and sea lion pupping (5/10 to 7/1)
3O 3Q Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31).

Contact ADF & G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 585-7235

ADF & G Don Calkins 267-2403

5R Seabird colony (5/1 to 8/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF & G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF & G Tom Rothen 267-2205

5T Bald eagle nests (5/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6J Recreation:
6V Campgrounds (5/1 to 9/15)
6W Forest Service cabins (5/1 to 9/15)
6X Lodges (5/1 to 9/15)
6Y Special use designation

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)
7H-HH Finfish harvesting
7E Deer harvesting (6/1 to 1/7)
7J-JJ Invertebrate harvesting
7K-KK Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF & G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pool which might affect intertidal or nearshore oil or toxicity levels, contact ADF & G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF & G Jim Feller 267-2359
SEGMENT ST1K0910-C0013 SUBDIVISION: C0013A DATE 4/24/90

NAME John Naughton SIGNATURE John J. Naughton

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

This segment had only one small area containing mousse which is recoverable. I collected a sample which included the easily removed mousse. No additional treatment recommended.

ADEC NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

One small 3m x 6m area at the eastern end of this segment contains recoverable mousse and cover. Manual removal in this area is recommended.

LAND MANAGER

NAME Carl Schock SIGNATURE Carl Schock

☑ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Any recoverable mousse within the 3 x 6 m patch should be removed.
SHORELINE OILING SUMMARY

OG: Linear Logging Wee (Nan) Town: Nanaimo SEGMENT STI 010-10-C003
BIO: BPA: M. Cameron LAND RE: (US) PARK: SASEM SUBDIVISION CD0/TA 1 OF 1
TEAM NO.: 19 TIDE LEVEL: 2.5 FT L.80 A.M. DATE: 4/26/19
EST. SUBDIVISION LENGTH: 1231 m

UPLANDS DESCRIPTION: Grass Energy Rock

SURVEYED FROM: Foot Boat Helo WORKING DIRECTION: East to West
SURFACE SEDIMENTS: 20% B 40% C 20% P 10% G 5% S 5% M 5% V
SLOPE: Lang 75% Hang 15% Ven 5% WAVE EXPOSURE: Low Med High
OIL CATEGORY LENGTH: W 0 m M 0 m N 3 m VL 250 m NO 100 m

SURFACE OIL

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<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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<td>COVER</td>
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<td>COAT</td>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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<td>FILM</td>
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PAVEMENT H F S NOW SQ. M BY. O cr

PATTIES/TARBALLS NONE BAGS

NEAR SHORE SHEEN? NO BR RW SL TL

OILED DEBRIS AMOUNT DID YOU COLLECT DEBRIS?

Logs: YES NO TYPE

Vegetation: 

Trash: 

Debris: 

#BAGS: 0

Photographs:

Roll No. ST-19-18

Frames 14-18

SUBSURFACE OIL

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<th>PIT NO.</th>
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<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED SEDIMENT</th>
<th>OILED OIL</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
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<th>SHEEN (YN)</th>
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COMMENTS

- LARGEST AMOUNT OF OIL AT NORTH END OF EMBAYMENT AT THE TOP OF THE UPPER INTER TIDAL 20
- EMBAYMENT CONSISTED OF SUBANGULAR BOULDERS BACKED BY HIGH CLIFFS

REVIEWS: E/ H DATE: 4/24/10
SKETCH MAP

ST-19-18-17

ST/ST'S

VEH. SPOTTED
SOLACE, ON BOULDER

ST-19-18-18

SAND

ST/ST'S

ALLATWATER

SHEEN, FOAM/SL

END HWY 30

ROCK PLATFORM

NO OIL

LOW W/T

START HWY

HIGH CLIFF

NO OIL

NARROW BOLDER AREA

IN BOULDER BLOACK

AREA IN HIGH CLIFF

MANUALLY REMOVE
MOUSE PATCH

EMBAYMENT

N

CHECKLIST
- N Amos
- Approx. Scale
- Geographical Study
- Oil Data
- Weather
- Length
- % Cover
- Sediment Character
- East & West
- Profile Location(s)
- Profile(s)
- Fill Location(s)
- Photo Location(s)

LEAD
1 = No Submerged Oil
2 = Submerged Oil

LEGEND

CT/C

CT/B

wet Distribution

wet Distribution

brackish Distribution

brackish Distribution

reef Vegetation

Log Location, Direction, and Number

MAN LEND (ft) AP... 0 FO 0 CV 20 CT 25 at 250 m 3 pt 0... 0... 60... 1678
SHORELINE ECOLOGICAL SUMMARY

Segment ST/K-9-10-C5-13 Subdivision A Date (mo/day/yr) 4-26-90

Time (24 hr) 1100-1145 Biologist D. McCormick

(A) Substrate type and % of segments:
- Bedrock 30
- Boulder 40
- Cobble 20
- Pebble 15
- Sand 5
- Silt 0

(B) Overall % cover of biota (% of segment):
- Dense 15
- Moderate 30
- Low 55

(C) Density, substrate preference (by number from A, above), &
vertical zonation of major taxa: (upper-U; mid-M; low tidal-L);
juveniles/adults (X), new settlement (3)

Wildlife Observations/General Comments: Eagles, gulls. Little bit on sand beaches
evergreen algal layer on L+2 boulders. Observations generally based on
rock/boulder portions of segment.

Ecological Considerations: Eagles nest + 2 eagles nearby (see ECO map). NOAA
suggests seabird colony(ies) in this segment - none observed. No anadrom
streams.

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Photographs:
- Roll No. ST-19-18
- Frames 14-18
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<th>1 = Bedrock</th>
<th>2 = Boulder</th>
<th>3 = Cobble</th>
<th>4 = Sand</th>
<th>5 = Silt</th>
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<td>4-24-90</td>
<td>1100-1145</td>
<td>-3.5' -1.8'</td>
<td></td>
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</table>

**Flora:**
- **Bosellia/Coralina**
- **Calliardion/Coralina**
- **Cladophora Spp**
- **Costaria Spp**
- **Endocladia Muricata**
- **Filamentous Greens**
- **Filamentous Red**
- **Gloiopeitis Furcata**
- **Halosaccion Glandiformis**
- **Laminaria Spp**
- **Lithothamnion**
- **Nereocystis Spp**
- **Porphyra Spp**
- **Ralphisia/Hildenbrandia**
- **Phodomela Larix**
- **Rhoemedia Palmata**
- **Scytosiphon Spp**
- **Ulva Spp**
- **Zostera Marina**
- **Entoromorpha**

**Fauna:**
- **Anthopleura Spp**
- **(Sem) Balunus Cariosus**
- **B. Glandula**
- **Bryozans**
- **Chitons (other than K. Tunicata)**
- **Clams**
- **Crabs**
- **Dermaeterias Diaphoecera**
- **Katharina Tunicata**
- **Leptaeterias Hexactis**
- **Limpets**
- **Littorina Spp**
- **Nuella Spp**
- **Pacilus Spp**
- **Pisaster Ochraceus**
- **Polychasters**
- **Pycnopodia Helianthoides**
- **Searlesia Diria**
- **Serpulids**
- **Siphonaria Thersites**
- **Tealia**
- **Octopus dofleini**

**Notes:**
- 2.3: Diverse in LTZ
- 1.2: Very dense on rocks
- 1.3: Dense in L-Subtidal
- 2.3: Moderately dense in patches
- 1: Juvenile individuals
- 1.2: Gently spaced. Not heaped
- 1.2: Dense on silt bottoms
- 5: Young individuals (a) washed up
ECO MAP

K-9-10-CD-13-A

CD-12

2 eagles

Eagle Nest on Cliff

20X Wide
/// Medium
---- Narrow
TTTT Very Light

Map Key: G0A-33
Name:
Date:
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-10-CD-013 SUBDIVISION A (1 of 1)

WORK WINDOW

| Manual Pickup | CLOSED |

NPS Representative to accompany work crew.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony Closed to all activities; work site is less than 800m from seabird colony.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncoiled biota and substrate. If seabird constraint is removed, other ecological considerations will apply. Restrict all activity to essential minimum, especially air traffic.

FOSC [Signature]
Date 6/20/90

Prepared by [Signature]
Date 6/20/90
ECOLOGY MAP
SEGMENT K9N-10 CD-13
SUBDIVISION ___ (___ of ___)
METERS

★ Seabird Colony
▲ Active Eagle Nest
▼ Inactive Eagle Nest
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-10-CD-013 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>CLOSED</th>
<th>OPEN</th>
</tr>
</thead>
</table>

NPS Representative to accompany work crew.

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 584-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

| 5R | Seabird Colony | OPEN | Closed to all activities; work site is less than 500m from seabird colony. |
| 5T | Bald Eagle Nest | NO CONSTANT USFWS | 6/1/90 MAP indicates no active nest within 400m of Subdivision A Work Site. |

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to uncollected biota and substrate. If seabird constraint is removed, other ecological considerations will apply. Restrict all activity to essential minimum, especially air traffic.

FOSC: Date 6-20-90
Prepared by: Date 6/20/90
ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K9-10-CD-13 SUBDIVISION A (1 of 1)

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to unoilied biota and substrate.

FOSC Date 6-22-90
Prepared by Date 6/22/90
ECOLOGY MAP
SEGMENT K9N-10 CD-13
SUBDIVISION A (___of___)

- Seabird Colony
- Active Eagle Nest
- Inactive Eagle Nest

Active Nest
Work Area

EXON
SHORELINE EVALUATION

SEGMENT ST/K09-10-CD-14 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
Katmai National Park

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unsoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/8/90

OILING CATEGORIZATION:

Wide 0 m: Medium 106 m: Narrow 97 m: V. Light 135 m: No Oil 599 m
Subsurface Oil Observed: Yes X No maximum depth 5 cm

RECOMMENDATIONS:

____ No Treatment Recommended
X Treatment Recommended
X Manual Pickup
X Bioremediation
____ Tarmat Removal

Snare/Absorbent Booms
Oil Snaps (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

COMMENTS: Recommended treatment includes manual removal of mousse in areas indicated on sketch map. No specific working time constraints.

TAG COMMENTS: Manual removal of mousse if inaccessible
Spot washing if required prior to bioremediation

TAG APPROVAL DATE: 5/8/90
ADEC [Signature] DATE: 5/18/90
EXXON [Signature] DATE: 5/12/90
NOAA [Signature] DATE: 5/12/90
USCG [Signature] DATE: 5/12/90

In pol has not approved. NRS Rep to be on scene. Special use permit required.
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/15; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/ or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2229

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for consultation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kukul Bay Hatchery releases
Pink salmon - late May - early June; Chum salmon - June; Sockeye salmon - early July.
Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1E Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olgak Bay (6/9 to 10/1)
East side Kodiak, East side Alognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net areas
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 468-4791

1M Herring spawning (4/15 to 8/20)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoltered intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 468-4791

1N Harbor seal and sea lion pupping (5/10 to 7/1)
1O Harbor seal and sea lion molting (6/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-situ within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for consultation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 6/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377
ADF&G Tom Roth 257-2225

5T All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (5/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377

6U Recreation:
6V Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (6/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 9/30)
7H Fish harvest
7S Deer harvesting (6/1 to 7/1)
JUJ Beaver harvesting
7KX Beaver harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-situ which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation’s contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fail 267-2359
Segement S1 K0910-C014 Subdivision: C014A Date: 4/26/90

NOAA NAME: John Naughton SIGNATURE: John J. Naughton

☐ No Treatment Recommended ☑ Treatment Suggested

Comments:

Although not on our priority list, this segment contains more oil than the other four segments surveyed today. The oil was found only in the southern portion of the segment. Several patches of medium oil but including recoverable mousse between large boulders. This oil should be removed. No condromous streams, mammals or unusual birds observed. Treatment recommended just in the medium oil area (also narrow).

ADEC NAME: Terry Ellisworth SIGNATURE: Terry Ellisworth

☐ No Treatment Recommended ☑ Treatment Suggested

Comments:

Mousse trapped in cracks and between boulders and cover on bedrock and boulders occurs in variable amounts from broken to patchy in the southern 300 m of the segment. If not removed this oil will persist. Manual removal is recommended. Removal of mousse from between boulders will be difficult and require the use of small tools.

LAND MANAGER NAME: Carl Schaal SIGNATURE: Carl Schaal

☐ No Treatment Recommended ☑ Treatment Suggested

Comments:

Recoverable mousse was found at the southern portion of this segment in several patches of variable dimensions. Sheen was observed in pooled runoff water below the heavier concentrations.
SOUTHERN EXTREMITY OF SEGMENT (≥ 300 m) HAS VARYING QUANTITIES OF OIL RANGING FROM VERY LIGHT IN THE ENTIRE AREA TO BROKEN IN AREAS, PARTICULARLY RE-ENTRANTS IN THE HIGH WAVE INTERZONE.
SHORELINE ECOLOGICAL SUMMARY

Segment ST/14-15 Subdivision A Date (mo/day/yr) 4-24-90

Time (24 hr) 11h5 - 12h5 Biologist D. McCormick

(A) Substrate type and % of segments:
- (1) Bedrock 30%
- (2) Boulder 40%
- (3) Cobble 30%
- (4) Pebble 10%
- (5) Sand 0%
- (6) Silt 0%

(B) Overall % cover of biota (% of segment): Dense 40% Moderate 25% Low 40%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles / adults (X), new settlement (6)

Wildlife Observations/General Comments: No mammal or birds observed in this segment.

Ecological Considerations: No anadromous streams. No eagle nests or seabird colonies. No ECO map included in this report.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K99-10-CD-14 SUBDIVISION A (1 of 1)

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
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<tbody>
<tr>
<td>Bioremediation*</td>
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</tbody>
</table>

*No Inpol - Use Custombien Only. NPS Rep. To Be On Location

ARCHAEOLOGICAL STANDARD CONSTRAINT
If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS
No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS
Avoid any unnecessary disturbance or damage to unolied biota and substrate.

FOSC
Date 07/06/90

Prepared by
Date 06-19-90
SHORELINE EVALUATION

SEGMENT ST/ K09-10-CD-015 SUBDIVISION A (1 OF 1) DATE 5/5/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
- T All Bald Eagle nests (3/1 to 6/1)
- Active Bald Eagle nests (3/1 to 9/1)
- 4ALL State Marine Park National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: DATE: 5/30/90

OILING CATEGORIZATION:
Wide 0_m: Medium 49_m: Narrow 8_m: V.Light 231_m: No Oil 1530_m
Subsurface Oil Observed: Yes NO X Maximum Depth 7+cm

RECOMMENDATIONS:
- No Treatment Recommended
- X Treatment Recommended
- X Manual Pickup
- X Bioremediation
- X Tarmat Removal
- _____ Snare/Absorbent Booms
- _____ Oil Snares (pom poms)
- _____ Absorbents (pads, rolls, etc)
- _____ Spot Washing: Wands
- _____ Beach Cleaner
- _____ Other (see comments)

COMMENTS: Recommend manual pick up of mousse, pooled oil and tarballs followed by bioremediation as indicated on the attached sketch map. Work after 6/1 with approval of USFWS regarding eagle nest.

TAG COMMENTS: CREWS TO AVOID ADJACENT UPLANDS

TAG APPROVAL DATE: 5/29/92
ADEC  EXXON  NOAA  USCG
Act: Weiss  Act: Weiss  BullWright  BullWright  Date: 6-13-90
Tag: Act: Weiss  Act: Weiss  Date: 6-13-90

FOSC: Imped is not authorized. Use Cautiously on wave cut platforms only as shown on sketch map.
Salmon stream mouth - fly outmigration (4/15 to 7/31)
Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADP&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADP&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADP&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADP&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADP&G Ken Middleton  267-2299

Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADP&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or chemical removal, can probably proceed without adherence to time constraints. Contact ADP&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADP&G  Larry Peitz  424-3214

Kotol Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or Inpil application, unless authorized by ADP&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADP&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADP&G  Larry Peitz  424-3214

Gill net area
Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Atogna (7/4 to 10/1)

Set net sites
Contact ADP&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict boat operations to essential minimum as authorized by ADP&G. If plans for treatment include methods such as hot water wash or Inpil application which might affect nearshore oil or toxicity levels, contact ADP&G for consultation and authorization.

AGENCY CONTACT PERSON: ADP&G  Larry Peitz  424-4791

Herring spawning (4/15 to 6/30)
Contact ADP&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoupled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or Inpil application which might affect nearshore oil or toxicity levels, contact ADP&G for consultation and authorization.

AGENCY CONTACT PERSON: ADP&G  Larry Peitz  424-4791

Harbor seal and sea lion pupping (5/10 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of Inpil within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADP&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADP&G Don Calkins  267-2403

Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADP&G Tom Rothby  267-2208

Shorebird/wader/fowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADP&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADP&G Tom Rothby  267-2208

All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

Recreation:
Tent sites (5/1 to 9/15)
Anchorage (5/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (5/1 to 9/15)
Special use destination

Subsistence area: Salmon harvesting (5/1 to 9/30)
Finfish harvesting
Deer harvesting (8/1 to 1/7)
Invertebrate harvesting

Contact ADP&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of Inpil which might affect intertidal or nearshore oil or toxicity levels, contact ADP&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADP&G Jim Fall  287-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 X O9-10 - C D015 SUBDIVISION: A ☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED DATE 5/5/90

NAME STEPHEN LEHMANN SIGNATURE

COMMENTS

Generally agree with ADEC assessment of the heavily impacted area, however, manual removal would require substantial disturbance of the beach. Suggest other methods of removal be considered. Further agree with ADEC that, despite the presence of oil, the shore of the segment should not to be treated due to the pair of nesting eagles.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

COMMENTS

Much of the oily in this segment consists of stain, coat and cover mousse occurs in bedrock cracks and crevices and interstitial between cobbles and boulders. There are two main areas of oiling in the segment, one at the east end of the segment and the second at the SW end of the segment. Smaller concentrations occur throughout the segment (see sketch map). Manual removal of mousse is recommended in the impacted area at the east end of the segment. Treatment is not recommended at the SW end because of the small amount of recoverable oil and the presence of an eagle nest with eggs.

LAND MANAGER

NAME Carl Schoch SIGNATURE Carl Schoch

COMMENTS

Recoverable oil consists primarily of interstitial mousse in the boulder/cobble areas indicated on the sketch maps and in isolated crevices/crevices in the bedrock shoreline. The pocket beach in the southwest corner of the segment contains some oiled logs and a large (10cm) tarball was found.
### SHORELINE OILING SUMMARY

**Segment ST/K-09-10-CD-015**

**Surveyed from:** Foot, Boat, Helo

**Working Direction:**
- **WAVE EXPOSURE:**
  - Low
  - Med
  - High

**Surface Sediments:**
- R 60%
- B 20%
- C 10%
- P 6%
- G 4%
- S 0%
- M 0%
- V 0%

**Slope:**
- Lang 10%
- Hang 60%
- Vert 30%

**Surface Oil**

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<tr>
<td>Tarballs</td>
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**No Oil**

**Subsurface Oil**

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<td>X</td>
<td>X</td>
<td>U</td>
<td></td>
<td>B-C/SPR</td>
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</tbody>
</table>

**Comments**

**Reviewed:** JAT, Date: 13 May 1990
OG Comments K-09-10-CD-015 5-5-90 G. Heyman

Segment consists of a narrow inlet bound by steep bedrock walls and beak or coveded slopes. The points north and south of the inlet are composed of wave cut bedrock platforms. A small pocket beach lies in the head of the inlet.

The majority of the oiling observed in this segment was located on the bedrock platforms at each segment boundary. The oiling occurred above the U1T2 in fairly well defined zones, splatters outside the zones indicated on the sketch map were not observed. Within the zones, M, ST, CT, 1CV combined to form 1P+1S distribution. On the northern point, a band of MS filled the pebble-gravel blank spaces in the interstices below boulders and cobble. Dark brown shiny MS was observed on the under-side of cobble in the 12-2m x 20 m band. The band was within a zone of MS-CV-CT-ST on the bedrock and boulders throughout the U1T2. Splatters of ST-CT-CV/S continued into the SUT2 and was observed randomly on drift logs. Two or 3 very small sheens were observed on tidal pools in bedrock crevasses.

On the southern point a 10X15 m area of ST-CT-CV/MS combined to form a patchy (~30-40% cover) distribution. This was surrounded by a ring ~5 m wide of the same oiling characters with <10% cover. The MS in this area was filling small fractures or occurred as 1-2mm thick patches w/ DBL exteriors & Shiny DBR sticky interiors. The fracture filling was overall <1cm thick
OG Comments K-09-10-CD-015 (concluded)

South of the northern boundary, 5 fractured bedrock-protected channels were observed with IS, IP +/− B distributions of MS + CT + CV + ST. The channels are narrow and the heavier oiling concentration are very limited in extent. MS was observed as small fracture filling or filling pebble-granule pores beneath boulders.

Two additional areas were observed with MS in pebbles and granules in boulder interstices. One 5×10 m area with IS distribution north of the pocket benches, and the other a 5×20 m area, with a 5×5 m area of interstitial MS/5.

The remainder of oiling observed in this segment occurred as very random splatters on boulders and bedrock. Areas where these were observed are shown on the sketch map.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST / CD-15**

**Subdivision**: A

**Date (mo/day/yr)**: 5/6/90

**Time (24 hr)**: 1900-1800

**Biolist**: SHARMAN

**Sent (12)**: 20% during summarization at 1200 (data window opened 1600).

### (A) Substrate type and % of segments:

1. Bedrock 60%
2. Boulder 20%
3. Cobble 10%
4. Pebble 5%
5. Sand 4%
6. Silt

### (B) Overall % cover of biota (% of segment):

- Dense
- Moderate
- Low

### (C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

1. Upper-U: mid-M; low tidal-L
2. Juveniles/adults (X), new settlement (3)

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#### GASTROPODS (*Angaria*, *Littorina*, *Lima*)

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**Wildlife Observations/ General Comments**: 25 plumose-wings gulls, 10 plumose gulls, 2 ravens, 1 crownt, 1 magpie, 1 sandhill crane attaching (unnaturally), 2 petrels at cliff edge (petrels identified v only actually seeing brown bird, unable to see feet). 1 pair adult breeding along with nesting (2 eggs) - see Sel. Considerate action (shelter, cover,距离 breeding from cliff edge). 1 pair adult breeding and nest in cliff edge. 1 petrel, 2 petrels, 2 petrels at cliff edge, cliff edge

**Ecological Considerations**: Densely refer to attached Eco Notes. The eagle nest is definitely very active (2 eggs ready, to hatch in 12 days). 2 Alaskan residents monitor nest site. The nest is up on cliff, cliff edge. 2 juveniles hatch in nest. Nest is protected from any human disturbance. Capture data, particularly the cliff edge along the entire segment, is very important for monitoring population and area. We note: J.N.S. representative reports there is another eagle nest just around the corner to the N. on adjacent segment CD-14.
General Comments (cont.):

These are abundant for scats; one observed deer scat, the usual man

deer/fox/craft trail along the Bluffedge. 3 bird bodies (species unknown -
probably gulls), a few areas of deer diggings (usually targeting Lupinus
roots), rare ptarmigan scat. Eagle/rov/gull feeding remains (fish, bones,
clot scat, within test frames). For scats contain feathers, bone fragments,
fern, dominant summer terrestrial plants are non-ety - Agrostis, Hololemma,
Cenchrus, some grasses (incl. Eriochloa), and another unidentified remain (Lily?).

This is a very exposed, wave-action rock cliff edrophic. Intuitively, the biological
community is naturally highly stressed/disturbed, a classic of its type, and
several appear perfectly normal + healthy. UTE bedrock pools often

dominated by Orontella and/or Lithothamnium and litorella emilia. Pools also
inhabited by Polytrichum, Seligeria canadensis, Bugloss, tidewater sculpins,
small Anthodiscus spp. (all 3 spp.), Enteromorpha, Vorticella spp., lingets.
Katharina. There are also UTE pools, but with considerably less Lithothamnium,
no anemone or clintonia. Some of the pools at the N. end of the segment have
a few small clintonia (this in the general location of the most heavily oiled
portion of the segment) - however, pool bottom are recruiting well, and the
mortality of Lithothamnium is ~5% overall (well within natural expectation,
+ clearly not at the level of known "oil-induced" mortality observed elsewhere).
At the N. end there are abundant black mangrove littorines attach into UTE + UTE
cest/corn causes on bedrock. Affect to estuarine oiling, however, are
not discernable. Bemudale are generally rare (dune locally) - spot are very
rare (but present). Fosses is quite rare but recruiting uncommonly well within
present - hits for randomness. Septiferid locally dense in lower UTE with
Fosses. Bemudale, Fosses, + Septiferid all can be very dense locally on flat
bedrock platform in the lower UTE. Found large (20cm) branched sponge
(Icadietes sp.? swarmed up in the drift line of boulder pocket beach.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-10-CD-015 SUBDIVISION A (1 of 1)

WORK WINDOW

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<tr>
<td>Bioremediation</td>
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*No Inpol - Use Customblen Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5T Bald Eagle Nest NO CONSTRAINT. USFWS 4/9/90 map indicates no active nest within 400m of Subdivision A work site.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota and substrate. Avoid adjacent uplands.

FOSC __________________________ Date 6-22-90

Prepared by ________________ Date 6/22/90
SHORELINE EVALUATION

SEGMENT ST/ K09-10-CD-16 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
41L National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Michael O'Keefe DATE: 5/15/90

OILING CATEGORIZATION:
Wide 0 m: Medium 76 m: Narrow 319 m: V.Light 1279 m: No Oil 503 m
Subsurface Oil Observed: Yes X No Maximum Depth 30+ cm

RECOMMENDATIONS:

X No Treatment Recommended ____ Snare/Absorbent Booms

X Treatment Recommended ____ Oil Snares (pom poms)
X Manual Pickup ____ Absorbents (pads, rolls, etc)
X Bioremediation ____ Spot Washing: Wands
____ Tarmat Removal ____ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommended treatment includes bioremediation of area as indicated on attached sketch map. No specific ecological time contraints identified.

TAG COMMENTS: Manual pickup of debris as indicated on sketch map.

TAG APPROVAL DATE: 5/15/90
ADEC Art Walker Deputy
EXXON Andy Tom
NOAA Bell S Woude
USCG J Milke
FOSC: DATE: 5-15-90
NO In Pol
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10, PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (7/21 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kotei Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - late June; Sockeye salmon - early July.

1E Gill net area

1F purse seine area
Mainland, west side Kodiak, Shuyak & Moser/Olga Bay (4/21 to 5/10)
East side Kodiak, east side Afognak (7/4 to 10/1)

1G purse seine hook-off

1H set net area
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 426-4791

2A Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unaltered intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-2406

3A Harbor seal and sea lion pupping (5/10 to 7/1)

3B Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: USFWS Steve Zimmerman 566-7225

5A Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5Bshorebird/sterletfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6A All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6B Recreational sites
Tent sites (9/1 to 6/15)
Anchorage (9/1 to 9/15)
Forest Service cabin (8/1 to 9/15)
Lodge (8/1 to 9/15)
Special use destination

6C Subsistence area: Salmon harvesting (8/1 to 7/30)
Finfish harvesting

7A Deer harvesting (8/1 to 1/17)

7C Invertebrate harvesting

7D Beer harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1   CD-16   SUBDIVISION: A   DATE 4/29/90

USCG
NAME        AEC Vandepels  SIGNATURE  AEC Vandepels

☒ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED
COMMENTS

ADEC
NAME        Michele Baer  SIGNATURE  MBaer

☐ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED
COMMENTS
Manually remove MS's, pebbles and cobbles with CV, and heavily coated substrate. Sporadic patches lay throughout the UTTZ. Suggest walking area and to locate patches as they are throughout the Northwestern 2/3's of the segment.

LAND MANAGER
NAME        Janis Meldrum  SIGNATURE  Janis Meldrum

☒ NO TREATMENT RECOMMENDED  ☒ TREATMENT SUGGESTED
COMMENTS
Mouse paths and mouse covered rock and sediments could be manually removed with shovel or spade. The STTZ was snow covered at the time of the survey. Area should be rewalked after snow recedes. Oil observed was right up against the snow.
**SURFACE OIL**

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<td>NO OIL</td>
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**SURFACE OIL**

- **PAVEMENT** H F S __sq. m by __cm
- **PATTIES / TARBALLS** __BAGS
- **NEAR SHORE SHEEN?** [NO BR RW SL TL]

**SURFACE OIL**

- **OILED DEBRIS** AMOUNT [SM MD LG]
  - Logs
  - Vegetation
  - Trash
  - Debris
  - **Did you collect debris?**
    - YES [ ], NO [ ]
    - Mousse patty [ ]
    - Tarball [ ]
    - Bags [ ]

**Photographs:**
- Roll No. ST-5-1
  - Frames 33 34

**COMMENTS:**
- Majority of the subdivision is low angle boulders and cobbles (and some areas with pebbles, granules and sand in BIC interstices) underlain by bedrock in the U-SITZ at the base of Vert R Bluffs. Almost all areas described as CT's and ST's oiling have sporadic splatters and droplets of weathered oil on and along the U-SITZ. Snow covers the SITZ along the center of the subdiv.

**REVIEWED:** DATE 3 MAY 92
XXX Wide
/// Medium
----- Narrow
TTTT Very Light
0000 No 011

CD-16-A
Exxon Segment Length: 2195m
AEC Segment Length: 2176m

Map Key: GOA-366
Name: C. Dillon
Date: 4/29/90

Handwritten Notes:
- Manual pickup of mousse prior to eco.
- Manual pickup of mousse
OIL CHARACTER LENGTHS (M): CV 1 CT 1249 ST 400 MS S NO 550

GOA 368

XXXX Wide
/// Medium
--- Narrow
TTT Very Light
0000 No Oil

CD-16-A

Exxon Segment Length: 2195m
ADEC Segment Length: 2175m

Map Key: GOA-368
Name: C. DILLON
Date: 4/29/90
Date Entered:
#### A. Substrate type and % of segments:

1. Bedrock 25%
2. Boulder 55%
3. Cobble 10%
4. Pebble 3%
5. Sand 2%

#### B. Overall % cover of biota (% of segment): Dense: 5 Moderate: 20 Low: 75

#### C. Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- **Juveniles / Adults (X)**, new settlement (3)

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### Wildlife Observations/General Comments:

- 2. Gulls
- 4. Harlequins
- 5. Ducks
- NPS rep found oiled Gull
- Eagles - Mature
- Eagles - Immature
- School of Geese Fish (approx 500)
- Seagull
- Goldeneye
- Crow - harrying Eagle

**Ecological Considerations:**

- Unknown - Office information was unavailable.
General Comments

- LITZ cobble & boulders are 50% covered with algae; 60% of the algae in LITZ is Filamentous green at East end of segment. As traveled west fil greens down to 25% and bladed muds increased. Rock bench 80% algae cover.

- Area has a high exposure with low biotic coverage.

- 50% of sand was comprised of crushed shell. No clam bed areas were observed.

- There was a globular green mass on top of LITZ rock. Appeared to be an algae mass. Unabled to ID - took photo #5T-5-7-35

- Found largest Kelp section I've seen this spring. 75 cm long.

- Rock bench in LITZ has a shallow layer of sand covering its surface.

- A gull wing and a chiton shell, both with light oil spots were found by the NPS rep on the upland grass above the beach.
ADDENDUM: SUBDIVISION CONSTRAINTS
SEGMENT K09-10-CD-16 SUBDIVISION A (1 of 1)

WORK WINDOW

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*No Inpol - Use Custombien Only

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

No ecological time constraints.

OTHER ECOLOGICAL CONSIDERATIONS

Avoid any unnecessary disturbance or damage to unooled biota and substrate.

FOSC  
Prepared by

Date

Date
SHORELINE EVALUATION

SEGMENT ST/K09-10-CD-17 SUBDIVISION A (1 OF 1) DATE 4/29/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
4ALL National Parks
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Michael O'Leary DATE: 5/15/90

OILING CATEGORIZATION:
Wide 0 m: Medium 0 m: Narrow 0 m: V.Light 191 m: No Oil 147 m
Subsurface Oil Observed: Yes ___ No X ___ Maximum Depth ___

RECOMMENDATIONS:
X No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snares (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: ___ Wands
___ Tarmat Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG COMMENTS:________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: 5/15/90
ADEC Art Wiese DATE: 5-15-90
EXXON Andy Crow FOSC:
NOAA ____________
USCG __________________

KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - try outmigration (4/15 to 7/31)

1B Salmon stream mouth - spawning (7/15 to 9/15; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach fishing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery areas (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kukat Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1E Remote release sites

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1F Gill net areas

1J Purse seine areas

Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)

East side Kodiak, East side Molyan (7/4 to 10/1)

1K Purse seine hook-off

1L Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncollared intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3P Harbor seal and sea lion pupping (5/10 to 7/1)

3Q Harbor seal and sea lion molting (6/15 to 8/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (6/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

SS Shorebird/waterfowl concentration (4/1 to 6/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

ADF&G Tom Roth 267-2206

6T All Broid Eagle nests (6/1 to 8/1)

Active Bald Eagle nests (5/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal; 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 785-3377

6U Recreation:

6V Anchorages (5/1 to 9/15)

6W Forest Service cabins (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence areas: Salmon harvesting (8/1 to 9/30)

7HH Flatch harvesting

7II Deer harvesting (5/1 to 7/1)

7IJ Invertebrate harvesting

7iK Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Felt 267-2359
SEGMENT ST 1 CD-17 SUBDIVISION: A DATE 4/29/90

USCG NAME AEC Vanderpol SIGNATURE AEC Vanderpol

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC NAME Michele Baer SIGNATURE 4/29/90

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Oiling limited to splatters on surface sediments. Cobble is very large and removal is not recommended. Area has very high wave energy due to exposure.

LAND MANAGER NAME Janis Meldrum SIGNATURE Janis Meldrum

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Oil removal could only be accomplished by scrubbing or scrap of rock surfaces.
OIL CARTEN: 1% VOLUME SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
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COMMENTS: MAJORITY OF OILING IS IN THE FORM OF COAT/STAIN DROPLETS (UP TO ABOUT 5cm DIAMETER) ALONG THE UFR OF THE ROCK AND Boulders. OILING IS LESS THAN 1% COVERAGE OR AN AVERAGE OF 3 OR 3 DROPLETS PER 1cm.

Pit 1 IS IN THE SITZ C/P BERM ON THE E END OF A C/P BEACH. THose BERM SUBSURFACE SEDS AND THE B/C/R FOR 20 m TO THE EAST.

WAVE CONTACT STAIN SPLATTERS UP TO 20 cm DIA. REVIEWED BY DATES 2/14/90.
(k9-10)
CD-17-A
339 m

Oil Character Lengths (m):
ct 92
st 97
no 150
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST/CD 17 | Subdivision: A | Date (mo/day/yr): 7/29/90
---|---|---
Time (24 hr): 1200-1300 | Biologist: Crank | Length: 339 ft
Tide Height: -18 ft

(A) Substrate type and % of segments:
- (1) Bedrock: 70%
- (2) Boulder: 20%
- (3) Cobble: 5%
- (4) Pebble: 3%
- (5) Sand: 2%
- (6) Sm

(B) Overall % cover of biota (% of segment):
- Dense: 10%
- Moderate: 20%
- Low: 70%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:
- (1) Juveniles/Adults (X), new settlement (3)
- Photographs: No photos
- Roll No.: 45
- Frames: 345

### Barnacles

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### Gastropods

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### Fucus

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Wildlife Observations/General Comments:

- 2. Gulls
- 1. Seal

Ecological Considerations:

- *Littoral zone* 80% rock and sand cover.
- Extensive tidepools area below +1'. With rich algae cover 30%.
- Intertidal biota similar to *Caulus*. This segment appears to have more yellow sponges, however, and seems to have a slight increase in biotic coverage.
- *Fucus* mussels are found in sporadic patches.
- Barnacles and gastropods are continuous population.
SHORELINE EVALUATION

SEGMENT ST/ K09-10-CD-100 SUBDIVISION A (1 OF 1) DATE 5/12/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
4LL State Marine Park National Parks 7/1 and from 8/1 - 9/15
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: [Signature] DATE: 5/12/90

OILING CATEGORIZATION:
Wide 0 m: Medium 22 m: Narrow 0 m: V.Light 521 m: No Oil 0 m
Subsurface Oil Observed: Yes No X Maximum Depth

RECOMMENDATIONS:
X No Treatment Recommended X Snare/Absorbent Booms
X Treatment Recommended X Oil Snares (pom poms)
X Manual Pickup X Absorbents (pads, rolls, etc)
X Bioremediation X Spot Washing: Wands
X Tarmat Removal X Beach Cleaner
X Other (see comments)

COMMENTS: Recommend treatment includes 1) manual pick up of pooled mousse 2) bioremediation of areas as indicated on sketch map. Work should be conducted between 7/1 and 7/31 with approval of USFWS regarding eagle nest.

TAG COMMENTS:

TAG APPROVAL DATE: 5/31/90
ADEC [Signature] DATE: 7-10-90
EXXON [Signature] FOSC: [Signature] DATE: 7-10-90
NOAA [Signature] Im pol wt authorized. Coordinate treatment
USCG [Signature] with FWS re environmental constraints.
NPS route & permit required.
KODIAC ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream beds or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical applications within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Kotei Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1K Purse seine hook-off
1L Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 483-4791

2M Harding spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unveiled intertidal and subtidal alage and seagrass. All plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 483-4791

3O, 3Q Harbor seal and sea lion pupping (5/10 to 7/1)

Harbor seal and sea lion molting (6/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of inipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

ADF&G Tom Rotby 267-2236

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 788-3377

6U Recreation:
Tent sites (6/1 to 9/15)
Anchorage (6/1 to 9/15)
Forest Service cabins (6/1 to 9/15)
Lodge (6/1 to 9/15)
Special use destination

6V Subsistence area: Salmon harvesting (6/1 to 9/30)

Harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2330
FIELD SHORELINE COMMENT SHEET

SEGMENT ST: K07-10-50/100 SUBDIVISION: A

DATE: 5/10/90

USCG NAME: Kenneth M. Treade

SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS:

There is broken coat and stain w/ patchy mousse and pooled oil in crevices in a 10 x 5 meter area of boulders. Splash stain on remaining upper inter-tidal area. Cleanup not feasible.

ADEC

NAME: Francisco J. Rpees

SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS:

Conson with Coast Guard rep's comments. Any cleanup is not practical, would be more intrusive than it's worth.

LAND MANAGER

NAME: Will Trogan

SIGNATURE: __________________________

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS:

Some mangrove remains, wedged between boulders. It will be difficult to remove. Any cleanup effort would have to be weighed against danger to seagulls. Having a local contact/land owner present would not sit well with the local/land owner unless there is...
## SHORELINE OILING SUMMARY

**USCG 191-09-CD-100**

**BIODIVERSITY**

**LAND REP**

**SUBDIVISION**

**TIME**

**DATE**

**EST. SUBDIVISION LENGTH:** 501 m

**TIDE LEVEL:**

**SURVEYED FROM:**

**SLOPE:**

**WAVE EXPOSURE:**

**OIL CATEGORY LENGTH:**

---

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<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (LYN)</th>
<th>SURFACE SEDIMENTS</th>
</tr>
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</tbody>
</table>

**OFFICIAL SEGMENT LENGTH DOES NOT ACCURATELY REFLECT ACTUAL SEGMENT LENGTH.**

See attached

**REVIEWED:**

**DATE:** 23 May
Segment K0910-CD-100 consists of the northern portion of Douglas Reef in Shelikof Strait. This low lying segment is composed primarily of a broad low lying boulder reef. At low tide this portion of Douglas Reef may be 1500 meters long and roughly 500 meters wide but the majority of this reef is completely covered at high tide. Near the center of the reef is a low sea stack roughly 200 meters across. This feature is grass covered and retains driftwood but does not appear to be above supra-tidal influences. The survey was conducted near low tide so most of the reef was exposed upon our arrival but when the survey was completed the incoming tide was rapidly covering the reef. The southern portion of the segment was surveyed on foot. It was not possible to survey the northern half of the reef on foot due to the danger of entrapment by the incoming tide, therefore the northern half was surveyed by helicopter. No oil was observed on the broad lower intertidal boulders which compose 90% of the reef. Very little stain was located in the mid-intertidal zone. The upper intertidal zone is restricted to the sea stack region. Traces of splattered tar coats surround the sea stack however the greatest concentration of oil is found on the eastern side of the sea stack. A 5x10 meter area on the north eastern side of the sea stack retained a broken coat and cover totaling 50% coverage in that area. In a bedrock crack at the base of the coat and cover was 5x5 centimeter pocket of pooled mousse. This mousse was brown and at least 2 centimeters deep. Silver sheen was observed in the tidal pools below this relatively concentrated oil. The majority of the oil noted appeared stable, however random patches of mousse still appear to be sheening. Due to the low profile of this reef, the official segment lengths for this segment do not accurately reflect its actual extent at low tide. (See sketch map.)
This segment is a low lying area, uncovered at low tide and almost completely covered at high tide. The lowest lying areas have a rock face covered with shell hash, sand, boulders, and some cobbles. The boulders and cobbles have a dense covering of algae on top: Rhodomenia, Rhodomenia, Fucus, Ulva, Halosaccion and Grisaria. Limpets (Notoacma scutum + persona) and Lithinia (calcium oozes and some epibionts) are under the algae cover. Under the boulders Leptodendron, Ochotona, Cistanha (?title) and Liparia, Spinellus, Legitimaria, Rhodomenia sp, Anomia (both Scale-worms and Nereis) and Euphyllia. Growing on bedrock up through the shell hash were Alaria, Zostera, laminaria, Coelaria, Grisaria, Entoplena (both artemisia and enteroxyllum) and Strongylocentrus droebachianus (invermion). Coralline algal and the sponge Notochondria canacea were in scattered patches throughout the reef (RTZ-NTRZ). In the NTRZ the flora was mainly: Zostera, Pleurophytus, Helophyllum, Alaria, Odontalia and Euphyllia growing on the bedrock between boulders. Rhodomenia, Rhodomenia, Fucus, Gigartina, Halosaccion and Ectocarpus cover the boulders and cobbles. Under the boulders and cobbles prickenback, Scalpina, heptera, Aspodo (Ochotona, Cistanha), Limpets, Anomia (Scaleworms and Nereis), Platelia, Tylophora polychaete, Pematostroma, and Phalacrono Arscheria (Euphyllia) were all common. Balanus cariosus, Balanus quinqueloba, Nucella sp, Notoacma sp, Buccina sp, Lithinia, Cardium, and Lithoria oregonensis were all found in this plot in the upper intertidal area. Balanus, Nucella, Lititia, Limpets, Fucus, Ectocarpus, Chlorophora, and few patches of Mytilus were formed.

There was no evidence of any mammal other than harbor seals on the reef. One dead pup (1 year old) was found. It appeared to have been killed in one area and then moved by the eagles closer to their next area. The hard out area was near solid boulders that had been oiled. The egas and Washing-wings gulls had nests but no eggs.

Birds seen on the reef or in the nearby water: Oyster Catchers (2), Eagles (2), Washing-wings Gulls (20), Black Turn Stones (10), Harlequin duck (6), Surf Scoter (6), Song sparrows (3), and Fox sparrows (2).
**SHORELINE ECOLOGICAL SUMMARY**

**Date (mo/day/yr):** 5/13/90

### Time (24 hr)

| Time | 0:15 | Biologist | H. Davis |

### Subdivision: CD-100

(A) Substrate type and % of segments:

1. Bedrock (1)
2. Boulder (2)
3. Cobble (3)
4. Pebble (4)
5. Sand (5)
6. Silt (6)

(B) Overall % cover of biota (% of segment):

- Dense 50%
- Moderate 50%
- Low 25%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- Upper-U: mid-M: low tidal-L:
  - Dense
  - Moderate
  - Sparse

#### BARNACLES

<table>
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<tr>
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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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#### MYTILUS

- Rare patches but within the patch moderate-Dense

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#### GASTROPODS

- Littorina, Moderately, Unio
- Spindle, Nucella

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#### FUCUS

- Patchy, all across the segment

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Wildlife Observational General Comments: See attached page.

Ecological Considerations: Not on the list of ecological constraints. There was a nest on the highest point of the reef. 2 adult eels were in the area but there were no eggs. 3-10 Harbor seals were seen on the edge of the reef. Up higher there was a sandy area where they had been hauled out. They probably will be having pups on the reef. (See attached Note)
**ADDENDUM: SUBDIVISION CONSTRAINTS**

SEGMENT K09-10-CD-100 SUBDIVISION A (1 of 1)

<table>
<thead>
<tr>
<th>WORK WINDOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual Pickup</td>
</tr>
<tr>
<td>Bioremediation*</td>
</tr>
</tbody>
</table>

*Bioremediation with Customblend only – Do not use Inipol. If eagle constraint is lifted, NPS monitor is required.

**ARCHAEOLOGICAL STANDARD CONSTRAINT**

If cultural resources are uncovered, PHONE 564-3274.

**APPLICABLE ECOLOGICAL TIME CONSTRAINTS**

<table>
<thead>
<tr>
<th>Code</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>5T</td>
<td>Bald Eagle Nest</td>
<td>USFWS 4/9/90 map indicates an active nest in Subdivision A. Closed to manual pickup and bioremediation within 400m of active nest. No constraint to manual pickup and bioremediation more than 400m from active nest.</td>
</tr>
<tr>
<td>3N,O,P,Q</td>
<td>Harbor Seal &amp; Sea Lion Pupping and Molting</td>
<td>Closed to bioremediation prior to 7/1 and after 7/31. Closed to manual pickup and spot washing prior to 7/1 and after 8/15.</td>
</tr>
</tbody>
</table>

**OTHER ECOLOGICAL CONSIDERATIONS**

If eagle nest constraint is removed, other ecological considerations will apply.

---

FOSC [Signature] Date 9/11/90

Prepared by [Signature] Date 7/10/90
SHORELINE EVALUATION

SEGMENT ST/ K09-10-CD-102 SUBDIVISION A (1 OF 1) DATE 5/12/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N, 3P Harbor seal and sea lion pupping (5/10 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
From Bio Comments Harbor Seal Haulout - restricted
5T(ST) All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
4LL State Marine Park National Parks
From 5/10 to 7/1 & from 8/1 to 9/15.
Adjacent segments has a possible Bald Eagle Nest/All Eagle Nests (3/1 - 6/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ______________________ DATE: 6/1/93

CULTING CATEGORIZATION:
Wide_0 m: Medium_0 m: Narrow_0 m: V.Light_0 m: No Oil_216 m
Subsurface Oil Observed: Yes_ No_X Maximum Depth________

RECOMMENDATIONS:
X No Treatment Recommended _____Snare/Absorbent Booms
___Treatment Recommended _____Oil Snares (pom poms)
___Manual Pickup _____Absorbents (pads, rolls, etc)
___Bioremediation _____Spot Washing:____Wands
___Tarmat Removal _____Beach Cleaner
_____Other (see comments)

COMMENTS: ____________________________________________________________

___________________________________________________________

TAG COMMENTS: _______________________________________________________

TAG APPROVAL DATE: 5/13/90
ADEC ________________ EXXON ____________________ FOSC: ______________________
NOAA ______________________ USCG __________________________ DATE: 6/8/90
KODIAK ECOLOGICAL CONSTRAINTS

Salmon stream mouth - fry outmigration (4/15 to 7/31)
Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1G Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Koiol Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - July.

1H Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or inipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1I Gill net area
1J Purse seine areas
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791

Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncultured intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or inipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791

3N, 3P Harbor seal and sea lion pupilning (5/10 to 7/1)
3O, 3Q Harbor seal and sea lion molting (9/15 to 9/19)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulout. No application of inipol within two weeks of arrival dates (window period at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Callins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

5S Shorebird/waterfowl concentration (4/1 to 8/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377
ADF&G Tom Rotty 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 6/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 766-3377

6U Recreation: Tent sites (6/1 to 9/15)
6V Anchorage (6/1 to 9/15)
6W Forest Service cabins (6/1 to 9/15)
6X Lodge (5/1 to 9/15)
6Y Special use destination

7Z Subsistence areas: Salmon harvesting (6/1 to 9/30)
7AH Fin salmon harvesting
7B Deer harvesting (8/1 to 1/7)
7LJ Invertebrate harvesting
7KK Bear harvesting (4/1 to 3/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of inipol which might affect...
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 1 K09-10 - CD10 SUBDIVISION: A DATE: May 12, 1990

USCG NAME ___________________________ SIGNATURE ___________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Not Available

IEC NAME Francisco T. Bennis SIGNATURE Francisco B.

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

No oil observed.

LAND MANAGER
NAME ___________________________ SIGNATURE ___________________________

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Not Available
The segment was split in two after the Coast Guard rep. and land manager had left Kodiak. Neither is available for comment.

There was no oil observed on segment K09 .10 to K09.102 as the new division stands. I have included the original comment sheet for the segment before the division.

Heather Davis 12/6
### SHORELINE OILING SUMMARY

**SEGMENT:** K09-10 SD10Z

**DATE:** May 12, 1990

**TEAM NO.:** 20

**TIDE LEVEL:** -0.5 to 0 ft

**UPLANDS DESCRIPTION:**
- Sun
- Clouds
- Fog
- Rain
- Snow

**SURVEYED FROM:**
- Ship
- Boat
- Helicopter

**WORKING DIRECTION:** West to East

**SLOPE:**
- Long
- Medium
- Short

**WAVE EXPOSURE:**
- Low
- Medium
- High

### SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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**PAVEMENT**
- H: 0 m
- F: 0 m
- S: 0 m

**NEAR SHORE SHEEN?**
- Yes
- No

**OILED DEBRIS**
- Logs
- Vegetation
- Trash

**AMOUNT**
- SM
- MD
- LG

**DID YOU COLLECT DEBRIS?**
- Yes
- No

**OIL / FILM COLOR**
- UO
- UC

**IMPACTED ZONES**
- SU
- UI
- M
- U

**PHOTOGRAPHS**
- Roll No.: ST-20-10
- Frames: 34

### SUBSURFACE OIL

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<th>PIT DEPTH (cm)</th>
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<th>BELOW</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (MIN)</th>
<th>V</th>
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**COMMENTS**

See attached
COMMENTS
SEGMENT KD910-CD-102

Greg Chaney
May 12 1990

Segment KD910-CD-102 consists of the southern most portion of Douglas Reef in Shelikof Strait. This low lying segment is composed of a broad low lying boulder reef. At low tide this portion of Douglas Reef may be 500 meters long and roughly 500 meters wide but it is probably completely covered during an extreme high tide. Drift wood was not present and oil was not observed on this portion of the reef. Due to the low profile of this reef, the official segment lengths for this segment do not accurately reflect it's actual extent at low tide.
Photocopy of photograph ST-20-10 #34

Segment K09 10 CD 102 looking toward segment K09 10 CD 100 on Douglas Reef.
**SHORELINE ECOLOGICAL SUMMARY**

Segment ST / K09-10  
Subdivision CD-102: __________________________ Date (mo / day / yr) 5/12/90

Time (24 hr) 11:15  
Biollogist: H. Davis

(A) Substrate type and % of segments:

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<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<tr>
<td>Boulder</td>
<td>4</td>
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<tr>
<td>Cobble</td>
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<tr>
<td>Pebble</td>
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<td>Sand</td>
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<tr>
<td>Silt</td>
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</tbody>
</table>

(B) Overall % cover of biota (% of segment):

- Dense: 25%
- Moderate: 50%
- Low: 25%

(C) Density, substrate preference (by number from A, above), and vertical zonation of major taxa: (upper-U; mid-M; low tidal-L; juveniles/adults X), new settlement (3)

Photographs: Roll No. ST- 20- 10

Frames 34

**BARNACLES** moderate to sparse on most of the reef

<table>
<thead>
<tr>
<th></th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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<td>L</td>
<td>7</td>
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**MYTILUS** Rare patches but within the patch moderate - Dense

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<td>6</td>
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**GASTROPODS** Littorina - Moderate, Limpet - Sparse, Nucella - Sparse

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**FUCUS** Patchy all across the segment

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</table>

Wildlife Observations/ General Comments: See attached page.

Ecological Considerations: Not on the list of ecological constraints. There was a nest on the highest point of the reef. A adult eagle were in the area but there were no eggs. 8-10 Harbor seals were seen on the edge of the reef. Up higher there was a sandy area where they had been hauled out. They probably will be having pups on the reef. (See attached Notes)
This segment is a low lying area, uncovered at low tide and almost completely covered at high tide. The lowest lying areas have a rock base covered with shell hash, sand, boulders and some cobbles. The boulders and cobbles have a dense covering of algae on top: Rhodomenia, Rheidalia, Fucus, Ulva, Halosaccion and Dridaea. Limpets (Notoacma scutum and persimna) and Lithium (both Lithinum and some scutatum) are under the algae cover. Under the boulders heptasterias, Ostrea, Cidaria (pillow), Nereis, Spinobis, Lepgiozephyra, Phyllodictys, Annulida (both Scaliozomes and Nereus) and Cyparissitea. Growing on bedrock up through the shell hash was Alaria, Zostera, laminaria, Costaria, Dridaea, Anthopleura (both artensia and varioyoomata) and Strongylocentrotus droebachensis (inversus). Coraline algae and the sponge Harandia panacea were in scattered patches throughout the reef (UTZ-UT2). In the UT2 the flora was mainly: Zostera, Phaeophyceae, Hedophyllum, Alaria, Odontalia and Dridaea growing on the bedrock between boulders. Rhodomenia, Rhodolima, Fucus, Gigartina, Halosaccion and Ctenosiphon cover the boulders and cobbles. Under the boulders and cobblesurchedebut, Sculpina, heptasteria, Sponges (Ophioden-taxaria), limpets, Annulida (Scaliozomes and Nereus), Phyllodictys (pilyched), Lepgiozephyra, and Nereus (Cyparissitea) were all common. Balanus carinatus, Balanus glumula, Nucella sp., Notoacma sp., Buccia sp., Lithinum, Ceraria, and Lithistidinae were all found in tide pools in the upper intertidal area. Balanus, Nucella, Lithinum, limpets, Fucus, Ctenosiphon, Ctenocystis, and few patches of Mytilus were found.

There was no evidence of any mammals other than Harrier seals on the reef. One dead pup (1st week) was found. It appeared to have been killed in one area and then moved by the eagles closer to their nest area. The hard out area was near oiled boulders that had been oiled. The eagles and Mew.Gulls were very active but no eggs.

Birds seen on the reef (or in the nearby water):
- Oystercatchers (6)
- Eagles (1)
- Mew.Gulls (10)
- Black turn stones (10)
- Harlin duck (6)
- Terns (6)
- Song sparrow (3), and Fox sparrows (2)
PHOTOGRAPHY LOG

ROL NO. ST-20-10  FROM 5/11 TO 5/12
TEAM NO. 20 PWS/KENAI/KODIAK/ AK. PENINSULA

<table>
<thead>
<tr>
<th>FRAME</th>
<th>NUMBER</th>
<th>PHOTOGRAPHER</th>
<th>DATE</th>
<th>EVENT</th>
<th>LOCATION/COMMENTS</th>
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<tr>
<td>30</td>
<td>N. Davis</td>
<td>5/11/90</td>
<td>KB-22, KF-01</td>
<td>Oilsy pollen in WZ</td>
<td></td>
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<tr>
<td>31</td>
<td></td>
<td>5/11/90</td>
<td>KB-22</td>
<td>Tarn Possible, Glassy hardened, Fractured black</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
<td>5/11/90</td>
<td>KB-22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>5/11/90</td>
<td>KB-22</td>
<td>Mousage and gravel on surface</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td></td>
<td>5/12/90</td>
<td>KB-101, KF-201</td>
<td>Chloryphous on rocks (KA-10 SD/AB)</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>5/12/90</td>
<td>KB-101, KF-201</td>
<td>Office</td>
<td>Greg Cheney and Ken Thaboe</td>
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<tr>
<td>36</td>
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<td>KB-101, KF-201</td>
<td>Office</td>
<td>&quot; &quot;</td>
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</tbody>
</table>
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-10-10-100

SEGMENT K09-11-CD-18 SUBDIVISION A

WORK WINDOW

Manual Pickup
Tarmat Removal
OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

Cultural Resource Survey in progress. Shoreline treatment cannot proceed until field data have been assessed and a formal archaeological constraint entered on shoreline evaluation form.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A, 1B Salmon Stream

ADF&G catalogued anadromous stream (262-10-1010c) is in Subdivision A. No constraint to manual pickup and tarmat removal.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unoiied biota and substrate. Sensitive Estuary.

SEE SUBDIVISION CONSTRAINT ADDENDUM K09-11-CD-18A
FOR ADDITIONAL CONSTRAINT INFORMATION.

Date 6-28-90

Prepared by Les D. Counter

Date 6-28-90

Date 6-30-90

FOSC
July 5, 1990

The National Park Service (NPS) will agree to the treatment recommendation on the segment referenced above only under the conditions specified by this office on May 21, 1990. If the Technical Advisory Group specifies the constraints, then treatment can be approved. The specific constraints include:

- Environmental sensitivities restrict treatment prior to July 11.

- Due to the sensitivity of this area, the potential hazard by brown bears, and the probable damage to the intertidal flats by large crews, the NPS recommends accessing this estuary for one day only with helicopters.

- Bioremediation with Inipol is not approved for this segment.

- NPS on-site monitor will be required.

- Special Use Permit will be required.

Cordell J. Roy
Acting Chief, Office of Oil Spill Coordination
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO. 262-10-10100

SEGMENT K09-11-CD-18 SUBDIVISION A

WORK WINDOW

<table>
<thead>
<tr>
<th>Manual Pickup</th>
<th>WORK AFTER 7/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tar mat Removal</td>
<td>WORK 7/11 - 7/15 (ADF&amp;G MONITOR REQ.)</td>
</tr>
<tr>
<td>Bioremediation Less Than 100m From Stream*</td>
<td>WORK AFTER 7/11</td>
</tr>
<tr>
<td>Bioremediation More Than 100m From Stream*</td>
<td></td>
</tr>
</tbody>
</table>

*No Inpol - Customblen Only

NPS MONITOR REQUIRED

ARCHAEOLOGICAL INSPECTION/CONSULTATION REQUIRED.

>>> PHONE 564-3274 (Anchorage) OR 229-1508 (24 hrs.) <<<

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream ADF&G catalogued anadromous stream (262-10-10100) is in Subdivision A. Bioremediation less than 100m from stream work 7/11 - 7/15 with ADF&G Monitor present. Bioremediation more than 100m from stream work after 7/11. Manual pickup and tammat removal work after 7/11.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Sensitive Estuary. No flushing of pollutants or sediments into stream drainage; do not allow Inpol to enter stream flow. On-site examination and consultation by ADF&G monitor is required prior to bioremediation in order to authorize a setback distance from the stream during chemical application; if ADF&G monitor's presence is impossible, authorization may be given by the ADEC monitor.

SEE SUBDIVISION CONSTRAINT ADDENDUM K09-11-CD-18A FOR ADDITIONAL CONSTRAINT INFORMATION.

Prepared by: [Signature] Date: 7/6/90

FOSC [Signature] Date: 7/6/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-12-CD-020 STREAM NO: 262-10-10070 DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
4LL State Marine Park National Parks

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to uncoiled biota and substrate.

SHPO SIGNATURE: Charles Z. Holm DATE: June 19, 1990

Subsurface Oil Observed: Yes X No Maximum Depth 35+cm

RECOMMENDATIONS:

X No Treatment Recommended

Treatment Recommended

Manual Pickup

Bioremediation

Tarmat Removal

Snare/Absorbent Booms

Oil Snare (pom poms)

Absorbers (pads, rolls, etc)

Spot Washing: Wands

Beach Cleaner

Other (see comments)

COMMENTS:__________________________________________________________

__________________________________________________________

__________________________________________________________

TAG COMMENTS:________________________

TAG APPROVAL DATE: 6/16/90

ADEC Ron Miller Ron

EXXON AUDIT TEAM

NOAA

USCG
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.
AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1D Kukak Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.
1E Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-3214

1I Gill net area
1J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Oiga Bay (8/9 to 10/1)
East side Kodiak, East side Alognak (7/4 to 10/1)
1K Purse seine hook-off
1L Set net area
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-4791

2M Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uned intertidal and subtidal algae and seaweed. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.
AGENCY CONTACT PERSON: ADF&G Larry Peitz 424-4791

3N, 3Q Harbor seal and sea lion pupping (5/10 to 7/1)
3O, 3P Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.
AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235
AGENCY CONTACT PERSON: ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 500m. Aircraft to maintain 500m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.
AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377

5S Shorebird/waterfowl concentration (4/1 to 6/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.
AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377
AGENCY CONTACT PERSON: ADF&G Tom Roathy 267-2206

5T All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m - 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 500m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.
AGENCY CONTACT PERSON: USFWS Jill Parker 756-3377

6U Recreation: Tent sites (5/1 to 6/15)
6V Anchorage (8/1 to 9/15)
6W Fishing Service cabins (8/1 to 9/15)
6X Lodge (8/1 to 9/15)
6Y Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 6/30)
7HH Pink salmon harvesting
7J Deer harvesting (8/1 to 1/7)
7JJ Invertebrate harvesting
7KK Bear harvesting (4/1 to 6/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pool which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.
FIELD SHORELINE COMMENT SHEET

Monument Creek

SEGMENT: 1.0915, CDN24-2
SUBDIVISION: 262-10-10070
DATE: 6/11/90

NOAA NAME: Tom Callahan
SIGNATURE: Tom Callahan

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS
Occasional splatter < 1 mm thick, on storm berm. High energy area which will continue to rework any remaining oil.

NOAA NAME: Terry Ellsworth
SIGNATURE: Terry Ellsworth

☐ NO TREATMENT RECOMMENDED
☐ TREATMENT SUGGESTED

COMMENTS
I agree with NOAA comments. No Treatment recommended.

LAND MANAGER: N.A.
NAME: ___________________ SIGNATURE: ___________________
FILE SHORELINE COMMENT SHEET

SEGMENT ST1 C2 C2C B SUBDIVISION: 262-10-10070 DATE 6/3/90

NAME JEFFREY BARNHART  SIGNATURE Jeffrey P Barnhart

☐ NO TREATMENT RECOMMENDED  ☐ TREATMENT SUGGESTED

COMMENTS

See Analssat Form. Due to the nature of the oil and the character of the stream mouth I do not recommend cleanup.  

Jeff Barnhart
**SHORELINE OILING SUMMARY**

**OG**: J. Springer, USCG-NMFA, T. Callahan, SEGMENT: 7
**BIO**: D. Lohse, LAND REP: J. Bankhart, SUBDIVISION: monument creek
**EXHON** Park Service, R. White, ADEC, T. Ellsworth
**TEAM NO.**: 19
**TIDE LEVEL**: +5 to +6
**DATE**: 06/01/19
**EST. SUBDIVISION LENGTH**: 550 m
**UPLANDS DESCRIPTION**: Grass
**SURVEYED FROM**: Foot
**SURFACE SEDIMENTS**: R: 15% B: 25% C: 50% P: 15% G: 5% S: 5% M: 5% V: 5%
**SLOPE**: Lang: 100% Hang: 50% Vert: 5%
**WAVE EXPOSURE**: Low
**OIL CATEGORY LENGTH**: W: 5 m M: 50 m N: 500 m

### SURFACE OIL

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**PAVEMENT**: H F S____ sq. m by____ cm

**PATTIES / TARBALLS**: _______ BAGS

**NEAR SHORE SHEEN?**: NO BR RW SL TL

**OILED AMOUNT**

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Photographs:

- **Roll No.**:____
- **Frames**:____

### SUBSURFACE OIL

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<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL (cm-cm)</th>
<th>BELOW OIL / FILM COLOR</th>
<th>OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>A N A</th>
<th>V</th>
<th>SUBSURFACE SEDIMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>X</td>
<td>1</td>
<td>X</td>
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<td>CPG / CPG</td>
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<tr>
<td>2</td>
<td>35</td>
<td>X</td>
<td>5-35</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>BC / CPGS</td>
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</tbody>
</table>

**COMMENTS**: Lower and mid-intertidal zones not surveyed.
SPRINGS 0020
ENT STK 141/72/7250
Monument Creek
VISION 06/01/90

SKETCH

CT/S/DBL
40 x 50 m
12% cover

oiled bird
feathers under

CB beach

Few pieces
of oiled debris.
Few splashes on
cobbles in berm
ADFDG MULTI-LESSON DATA FORM

1 SURVEY TYPE: BS (D) OS TS AVS SCHA HOS RS PTA
2 REGION: PWS KPC KAP

METHOD: Aerial Ground Boat

3 DATE: 6/1/90
4 START TIME: 2000
5 STOP TIME: 2045
6 SEGMENT #: CD008B
7 STATION #: 19 TIDE HT AT SURVEYS:
8 K-UNIT #: Ebb Stack Flood Stack
9 STAT AREA: 3/2-10
10 LAT: 59° 44' 31.5"
11 LIG: 153° 33' 43.5"
12 SOURCE: Map Lorac (Anadcat)
13 LOCATION: Douglas Reef Area, Alaska Peninsula
14 DESCRIPTION:

EXTENT OF OIL

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>V</td>
</tr>
</tbody>
</table>

27 SURFACE COVERAGE
28 SURFACE THICKNESS
29 PENETRATION
30 OVERALL OIL IMPACT: N | V| L | N | M
31 OIL TYPE: Pooled | Mouse | Tar | Asphalt | Grease | Stain
32 OILED DEBRIS: Y | N
33 SHORELINE TYPE: Headland | Low-lying Rocks | Beach | Cove | Lagoon | Marsh
34 WAVE EXPOSURE: High | Moderate | Low
35 SUBSTRATE TYPE: Bedrock | Boulder | Cobble | Gravel | Sand | Med/silt

37 CATALOG #: 602-10-0070
38 STREAM NAME: Monument Creek
39 OIL IN STREAM BED: Y | N
40 OIL ON STREAM BANK: Y | N
41 OIL ON BEACH ADJACENT TO MOUTH: Y | N (within 50 meters)
42 OIL WITHIN 1 MILE OF STREAM: Y | N

43 ANADROMOUS FISH PRESENT: Y | N
44 ANADROMOUS FISH OBSERVATION

COMMENTS:

ST CT TB 1P, Debris: L/LG/C at high tide line. 2 meter band on N side of stream on beach front and continuing up to stream bank. Several TSPs dug indicate oil penetration up to 2 feet. Oiled debris includes wet brown mouse spots up to 5mm, and tar staining coating present on cobble in the TSP. South side of stream/stream junction shows ST CT TB 1P, Oiled Debris: LT.
ANADROMOUS FISH STREAM EVALUATION

262-10-10080
SEGMENT ST/K09-11-CD-020 STREAM NO: 262-10-10090 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 6/31)
8AA Sensitive estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

No ecological constraints regarding intertidal biota.

SHPO SIGNATURE: [Signature] DATE: 5/23/90

Subsurface Oil Observed: Yes No X Maximum Depth________

RECOMMENDATIONS:

No Treatment Recommended Snare/Absorbent Booms
Treatment Recommended Oil Snares (pom poms)
X Manual Pickup Absorbents (pads, rolls, etc)
Bioremediation Spot Washing: Wands
Tarmat Removal Beach Cleaner
Other (see comments)

COMMENTS: Recommend manual pick up of mousse and cleanup debris as indicated on attached sketch map. Contact ADF&G for work window dates.

TAG COMMENTS:

TAG APPROVAL DATE: 5/18/90
ADEC Art Weimer Art Weimer
EXXON [Signature] [Signature]
NOAA [Signature] [Signature]
USCG [Signature] [Signature] DATE: MAY 25 1990
**KODIAK ECOLOGICAL CONSTRAINTS**

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 8/16; PEAK 8/16)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

**AGENCY CONTACT PERSON:** ADF&G Ken Middleton 267-2290

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore or oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

**AGENCY CONTACT PERSON:** ADF&G 424-3214

1D Kotsol Bay Hatchery release

Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-pool application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

**AGENCY CONTACT PERSON:** ADF&G Larry Peitz 424-3214

1I Gill net area

1J Purse seine area

Mainland, West side Kodiak, Shuyalk & Moser/Olga Bay (8/9 to 10/1)

East side Kodiak, East side Afognak (7/4 to 10/1)

1K Purse seine hook-off

1L Set net sites

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

**AGENCY CONTACT PERSON:** ADF&G Larry Nicholson 486-6791

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unseeded intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-pool application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

**AGENCY CONTACT PERSON:** ADF&G Larry Nicholson 486-6791

3 Harbor seal and sea lion pupping (5/10 to 7/1)

3 Harbor seal and sea lion molting (8/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 500m horizontal and 300m vertical distance from haulouts. No application of in-pool within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

**AGENCY CONTACT PERSON:** US National Marine Fisheries Service Steve Zimmerman 566-7235

ADF&G Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 6/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 786-3377

ADF&G Tom Rothy 267-2208

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 500m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

**AGENCY CONTACT PERSON:** USFWS Jill Parker 786-3377

6U Recreation: Tent sites (8/1 to 9/15)

6V Anchorages (8/1 to 9/15)

6W Forest Service cabins (8/1 to 9/15)

6X Lodge (8/1 to 9/15)

6Y Special use destinations

7Z Subsistence area: Salmon harvesting (6/1 to 9/30)

7H Indian fishing (8/1 to 7/1)

7I Deer harvesting (8/1 to 1/7)

7J Invertebrates harvesting

7K Bear harvesting (4/1 to 6/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of in-pool which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

**AGENCY CONTACT PERSON:** ADF&G Jim Fall 267-2235
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  CD-20 A  SUBDIVISION: 262-10-10090  DATE 02 MAY 90

USCG  NAME Kerwin H. Dreher  SIGNATURE  2wo H. H. Miles

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Type A manual removal.

ADFC  NAME  Eduard W. Weiss  SIGNATURE  Eduard W. Weiss

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
Suggest removal of oily debris (boom, etc) and small bands of particulate.

LAND MANAGER  NPS  NAME  Carl Schook  SIGNATURE  Carl Schook

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
This lagoon/estuary system is very protected and any oil and oiled debris can be expected to persist for a long time. A cleanup crew should be sent in to remove oiled drift, rope, sorbent boom and band of patchy mousse.
## Shoreline Oiling Summary (AnaD)

**OG**: CAL LARSON  
**USCG**: DREHAR, C.W.E  
**Bio**: KEN CRITCH low  
**LAND REP**: GARY SCHEM  
**STREAM**: 222-10X  
**EXXON**: DARL YOES  
**ADFG**: ROO MIN  
**TEAM NO.**: 16  
**TIDE LEVEL**: +1.9 FT  
**DATE**: 5/12/90  
**EST. SUBDIVISION LENGTH**: 900 m  
**UPLANDS DESCRIPTION**:  
- Grass  
- Forest  
- Rock  
**SURVEYED FROM**:  
- Foot  
- Boat  
- Helo  
**SURFACE SEDIMENTS**:  
- R:  
- B:  
- C: 30%  
- P: 30%  
- G: 30%  
- S: 10%  
- M:  
- V:  
**WAVE EXPOSURE**:  
- Low  
- Med  
- High  
**SLOPE**:  
- Lang  
- Hang  
- Vert  
- %

### Surface Oil

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<td>Asphalt</td>
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<tr>
<td>Cover</td>
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<tr>
<td>Coat</td>
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<tr>
<td>Stain</td>
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<tr>
<td>Mousse</td>
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<tr>
<td>Patties</td>
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<tr>
<td>Tarballs</td>
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<tr>
<td>Film</td>
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</tr>
<tr>
<td>No Oil</td>
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</tr>
</tbody>
</table>

### Pavement

- H: S: 0 sq. m by 0 m  
- Patties/Tarballs: BAGS

### Near Shore Sheen?

- No  
- BR  
- RW  
- SL  
- TL

### Photographs:

- Roll No.:  
- Frames:  

### Subsurface Oil

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED MATTER</th>
<th>OILED DEBRIS</th>
<th>OILED VEGETATION</th>
<th>OILED TRASH</th>
<th>OILED DEBRIS</th>
<th>OILED VEGETATION</th>
<th>OILED TRASH</th>
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### Comments

- No pits dug due to lack of oil penetration.
**Survey Type:** 28, 32, 38
**To Ave:** Sona
**Region:** PS4
**Field:** 06

<table>
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<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td><strong>Date:</strong></td>
<td>5/2/90</td>
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<tr>
<td><strong>Start Time:</strong></td>
<td>1434</td>
</tr>
<tr>
<td><strong>Stop Time:</strong></td>
<td>1525</td>
</tr>
<tr>
<td><strong>Station:</strong></td>
<td>2820A</td>
</tr>
<tr>
<td><strong>Location:</strong></td>
<td>24 mi SW of VABM “South Douglas”</td>
</tr>
<tr>
<td><strong>Description:</strong></td>
<td>Local Description 3.16S 05W12</td>
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</table>

**Extent of Oil**

<table>
<thead>
<tr>
<th>Shoreline</th>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surface Coverage:</strong></td>
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</tr>
<tr>
<td><strong>Surface Thickness:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Penetration:</strong></td>
<td></td>
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<tr>
<td><strong>Overall Oil Impact:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Oil Type:</strong></td>
<td></td>
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<tr>
<td><strong>Oiled Debris:</strong></td>
<td></td>
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<tr>
<td><strong>Shoreline Type:</strong></td>
<td>Headland, Low-lying Rocks, Beach, Cove</td>
</tr>
<tr>
<td><strong>Wave Exposure:</strong></td>
<td>High, Moderate, Low</td>
</tr>
<tr>
<td><strong>Substrate Type:</strong></td>
<td>Bedrock, Boulder, Cobble, Gravel, Sand, Mud/Silt</td>
</tr>
</tbody>
</table>

**Comments:**

ST/S on cobble bank south side of stream mid tap area below storm boom, where stream comes from lagoon. Also 3’ section of oiled absorber boom. ST/S also 12’ x 1’ in head of lagoon. Some ST/L in storm drift line.
Two streams, Monument (No) and Clear (Sa) creeks feed into a common lagoon behind a large storm

bell and log jam that protect the lagoon from

high energy exposure that affects the fronting

beach. No oil nor marine organisms was observed

on the beach. The left (So) bank of the stream

where it crosses the beach was characterized by

a heavy log jam at the base of which oil

stain was observed along with some splatter.

A sorbent boom stained by oil was found in

this location. Some small areas of oiled drift,

mousse, patties and stain were observed

near the water's edge in the lagoon.

No ecological constraints were apparent.

K.A. Gitchlow
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NOS. 262-10-10080 and 262-10-10090

SEGMENT K09-12-CD-020 SUBDIVISION A

WORK WINDOW

Manual Pickup      OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream ADF&G catalogued anadromous streams (262-10-10080 and 262-
10-10090) are in Subdivision A. No constraint to manual pickup.

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unrolled biota and substrate. Sensitive estuary.

SEE SUBDIVISION CONSTRAINT ADDENDUM K09-12-CD-020 FOR ADDITIONAL CONSTRAINT INFORMATION.

FOSC
Date 6-16-90

Prepared by
Date 6/15/90
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-11-CD-020 STREAM NO: 262-10-10092 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (3/1 to 5/15)
1B Salmon stream mouth - spawning (7/10 to 8/31)
8AA Sensitive estuary

See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:

No ecological constraints regarding intertidal biota.

SHPO SIGNATURE: [Signature] DATE: 5/22/90

Subsurface Oil Observed: Yes_____ No X _____ Maximum Depth_____

RECOMMENDATIONS:

____ No Treatment Recommended  ______ Snare/Absorbent Booms
____ Treatment Recommended  ____ Oil Snares (pom poms)
____ Manual Pickup  ______ Absorbents (pads, rolls, etc)
____ Bioremediation  ______ Spot Washing: Wands
____ Tarmat Removal  ______ Beach Cleaner
____ Other (see comments)

COMMENTS: Recommend manual pick up of mousse and patties in the UITZ and SUTZ as indicated on the attached sketch map. Contact ADF&G for work window dates.

TAG COMMENTS: Monitor to assess SUTZ - snow covered during 5/17

TAG APPROVAL DATE: 5/18/90

ADEC Art Weiner Art Weiner

EXXON AMY DATE

NOAA Gary Peterson Gary Peterson

USCG C.A. Weiner C.A. Huster

DATE: MAY 25 1990
FIELD SHORELINE COMMENT SHEET

Segment ST1 CD-20 A Subdivision

USCG Name: Kerwin L. Dreher
Signature: cwo K L Wall

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Comments:
Type A manual removal.

ADSG
Name: Edward W. Weiss
Signature: Edward W. Weiss

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Comments:
Stream lagoon is low energy with MS EPT/P on south bank up to 700 m back into lagoon north bank has lighter T8, ST/S
Recommend Type A manual cleanup.

LAND MANAGER
Name: Carl Schack
Signature: Carl Schack

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Comments:
This lagoon estuary system is very protected and any remaining oil can be expected to persist for a long time.
Banks and sporadic paths of mousse should be removed with shovels. Bands of stained pebbles should be left undisturbed, oiled debris including fishing net should be cut free and removed.
ADFEQ MULTI-ASSESSMENT DATA FORM

1 SURVEY TYPE: ES O3 OS TS AVS SCHA MMHs PTA
2 REGION: PMS XP CI XAP

METHOD: Aerial [ ] Boat [ ]

3 DATE: 5-2-90
4 START TIME: 1253
5 STOP TIME: 1415
6 SEQUENT #: CD20A
7 STATION #: [ ]

10 LAT: [ ]
11 LONG: [ ]

12 SOURCE: Map [ ] Loran [ ] CAT [ ]
13 LOCATION: [ ]
14 DESCRIPTION: 2mi. SSWD of Douglas Creek Lagoon

EXTENT OF OIL

SHORELINE

<table>
<thead>
<tr>
<th>L</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
</table>

STREAM

<table>
<thead>
<tr>
<th>L</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
</table>

27 SURFACE COVERAGE:

28 SURFACE THICKNESS:

29 PENETRATION:

30 OVERALL OIL IMPACT: N Y L M H

31 OIL TYPE: Pooled [ ] Husked [ ] Tar [ ] Asphalt [ ] Sticky [ ] Stain [ ]

32 OILED DERRIS: Y N

33 SHORELINE TYPE: Headland [ ] Low-lying Rocks [ ] Beach [ ] Cove [ ] Marsh [ ]

34 WAVE EXPOSURE: High [ ] Moderate [ ] Low [ ]

35 SUBSTRATE TYPE: Bedrock [ ] Boulder [ ] Cobble [ ] Gravel [ ] Sand [ ] Mud/silt [ ]

36 CATALOGED ANAD. FISH STREAM Y N
37 CATALOG #: 90 02-30 100 42
38 STREAM NAME: NONE [ ]
39 OIL IN STREAM BED: Y N
40 OIL ON STREAM BANKS: Y N
41 OIL ON BEACH Adjacent to Mouth: Y N

42 OIL WITHIN 1 MILE OF STREAM: Y N
43 WHERE:

44 ANADROMOUS FISH OBSERVATION

<table>
<thead>
<tr>
<th>Species</th>
<th>Aerial</th>
<th>Ground</th>
</tr>
</thead>
</table>

45 COMMENTS:

ST/S ON STREAM BED/BANKS, MS & PT/P IN BEND OF STREAM BANK AFTER IT COMES OUT OF LAGOON AND ALONG SOUTH BANK OF LAGOON. TB, ST, SV/S ON BANK NORTH SIDE OF LAGOON & LAGOON BANK BEHIND BEACH FACET.
Seg ID: CD-020A  
Survey Date: 5/2/90  
Comments by: Ken Critchlow

This stream crosses a high energy beach backed by a significant storm berm and log jam. No oil was observed on this beach. Behind the storm berm the stream flows through a large lagoon. Within the lagoon right and left banks were observed to have been oiled by scattered, small patties, tar-balls and stain. Most of the oil was observed at or near the edge of the STZ. No ecological constraints were apparent.

KK Critchlow
ANADROMOUS FISH STREAM EVALUATION ADDENDUM

CONSTRAINTS FOR STREAM NO 262-10-10092
SEGMENT K09-11-CD-020 SUBDIVISION A

WORK WINDOW

Manual Pickup OPEN

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

1A,1B Salmon Stream ADF&G catalogued anadromous stream (262-10-10092) is in Subdivision A. No constraint to manual pickup

OTHER ECOLOGICAL CONSIDERATIONS

No disturbance to stream bed or banks. Avoid any unnecessary disturbance or damage to unooled biota and substrate Sensitive estuary

SEE SUBDIVISION CONSTRAINT ADDENDUM K09-11-CD-020A FOR ADDITIONAL CONSTRAINT INFORMATION

FOSC Prepared by

Date 6-16-90
Date 6-15/90
ANADROMOUS Stream Evaluation

ECOLOGY MAP
SEGMENT K9N-11 CD-20
SUBDIVISION A (1 of 1)

TREATMENT

EXON
Exxon Company, USA
Map Keys: K9N-11 CD-20
June 08, 1990

★ Seabird Colony
▲ Active Eagle Nest
▼ Inactive Eagle Nest

1 inch = 4018 feet

METERS
0 1225 2449
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-12-X6500 STREAM NO: 262-10-10040 DATE 5/2/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
5S Shorebird/waterfowl concentration (4/25 to 5/15)
See attached Ecological Constraint sheet for specific constraints and contracts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
See above.

ARCHAEOLOGICAL CONSTRAINTS:

If treatment is planned, a cultural resource evaluation is required prior to shoreline treatment.

SHPO SIGNATURE: __________________ DATE: __________________

Subsurface Oil Observed: Yes____ No X____ Maximum Depth_____

RECOMMENDATIONS:

X No Treatment Recommended
____ Treatment Recommended
____ Manual Pickup
____ Bioremediation
____ Tarmat Removal

Snare/Absorbent Booms
Oil Snares (pom poms)
Absorbents (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

TAG APPROVAL DATE: __________
ADEC ________________ FOSC: __________ DATE: __________
EXXON __________________
NOAA __________________
USCG __________________
FIELD SHORELINE COMMENT SHEET

SEGMENT ST1  K-0912  SUBDIVISION: 362-10-10046  DATE 02 MAY 90

USCG
NAME  Kenwin L. Dreher  SIGNATURE  CWO  K. L. Dreher

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
NOTE: The west shore line of the larger lagoon was still snow covered. I suggest re-surveying this area after the snow melts back. The area I did survey (the east shore) had <1% stained driftwood and minimal very, weathered/dry splatter on snow submerged cobbles.

ADOE  AD16G
NAME  Edward S. Weiss  SIGNATURE  Edward S. Weiss

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
LAGOON SEGMENT IS LOW ENERGY AND NATIVE AND COVER ON COBBLES DO PRODUCE SLIGHT SHEEN WHEN RUBBED, THIS SHEEN DOES DISSIPATE READILY IN WATER. STREAM NEEDS TO BE RESURVEYED FULLY WHEN SNOW COVER MELTS AND WATER LEVEL IS DOWN. BANG OF (PT. TB, CV. ST)/P IS CURRENTLY 12-24° GENE Barrel. SURFACE, CLEANUP WOULD ALSO HAVE TO WAIT UNTIL WATER LEVEL RECEDES. OIL IS ONLY PARTIALLY VISIBLE DUE TO WATER DEATH AND SALT.

LAND MANAGER  NPS
NAME  Carl Schloch  SIGNATURE  Carl Schloch

☐ NO TREATMENT RECOMMENDED  ☑ TREATMENT SUGGESTED

COMMENTS
This lagoon should be resurveyed at a lower water level in order to determine the exact extent and degree of oiling. This document represents a partial survey only. Based on these findings the observed oil on debris and cobbles should be removed. This lagoon/estuary system is very protected and oil will persist for a long time unless removed. Oil can be removed by wiping with sorbent towels on removing with shovels. Cleanup should not begin until water recedes.
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL/FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT</td>
<td></td>
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<tr>
<td>PAVEMENT</td>
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<tr>
<td>POOLED</td>
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<tr>
<td>COVER</td>
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<tr>
<td>COAT</td>
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<tr>
<td>STAIN</td>
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<td>/</td>
</tr>
<tr>
<td>MOUSSE</td>
<td></td>
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</tr>
<tr>
<td>PATTIES</td>
<td>/</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td>TARBALLS</td>
<td>/</td>
<td>/</td>
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</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

**PAVEMENT H F S**

- O sq. m by O cm

**PATTIES/TARBALLS**

- 2 BAGS

**NEAR SHORE SHEEN?**

- NO

**OILED DEBRIS**

- Logs ✓
- Vegetation ✓
- Trash
- Debris

**TOTAL DEBRIS**

- BAGS 0

**Photographs:**

- Roll No. __________
- Frames __________

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED DEBRIS</th>
<th>OILED INTERNAL</th>
<th>OILED PRESSURE</th>
<th>OILED INTERNAL</th>
<th>OILED PRESSURE</th>
<th>OILED INTERNAL</th>
<th>OILED PRESSURE</th>
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**COMMENTS**

Due to spring run off back trail, lagoon under water level was higher. Oil drips, splatter, patties were under water. Oil observed was heavily weathered. Some oiled grasses were observed along bank of back shore in lagoon. No pits dug.

**REVIEWED**

- JW 5/6/10
## ADFOG Multi-Assessment Data Form

**Survey Type:** DE  
**Date:** 5/2/90  
**High Tide Times:**  
**Start Time:** 1840  
**High Tide HT:**  
**Stop Time:** 1635  
**Low Tide Time:** 1850  
**Station #:**  
**Tide HT at Survey:**  
**X-Unit:** K0912  
**Stat Area:**  
**Lat:**  
**Long:**  
**Source:** Map Loran  
**Location:** DOUGLAS REEF AREA, AK PENINSULA  
**Description:** IN NW of VABM "DARK"  

### Extent of Oil

<table>
<thead>
<tr>
<th>SHORELINE</th>
<th>STREAM</th>
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<tbody>
<tr>
<td>L</td>
<td>H</td>
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<table>
<thead>
<tr>
<th><strong>Surface Coverage</strong></th>
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<thead>
<tr>
<th><strong>Surface Thickness</strong></th>
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<tr>
<th><strong>Penetration</strong></th>
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<tr>
<th><strong>Overall Oil Impact</strong></th>
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<table>
<thead>
<tr>
<th><strong>Oil Types</strong></th>
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<table>
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<tr>
<th><strong>Oiled Object</strong></th>
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<tr>
<th><strong>Shoreline Type</strong></th>
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<tr>
<th><strong>Wave Exposure</strong></th>
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<tr>
<th><strong>Substrate Type</strong></th>
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</thead>
</table>

| **Comments:** BAND OF PITS, CV, ST Y/P BEGINNING AT MOUTH CONTINUING ON AROUND EAST BANK OF LAGOON, BAND IS AT NORMAL LOW Tidal Area but due to melt off 15' 12-24" BELOW WATER SURFACE OF LAGOON AT LOW TIDE, ONLY SURVEYED 1/3 OF LAGOON, 1/3 COVERED WITH SNOW, 1/3 UNSURVEYED DUE TO TIME CONSTRAINTS. MOUSSE FAIRLY WEATHERED BUT STILL |

<table>
<thead>
<tr>
<th><strong>Cataloged AMD, Fish Present?</strong></th>
</tr>
</thead>
</table>

| **Catalog #:** 262-10-10040 |

| **Stream Name:** TRIPLE LAKES CREEK |

<table>
<thead>
<tr>
<th><strong>Oil in Stream Bed?</strong></th>
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<table>
<thead>
<tr>
<th><strong>Oil on Stream Banks?</strong></th>
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<table>
<thead>
<tr>
<th><strong>Oil on Beach Adjacent to Mouth?</strong></th>
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<table>
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<tr>
<th><strong>Oil within 1 Mile of Stream?</strong></th>
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<table>
<thead>
<tr>
<th><strong>Anomalous Fish Present?</strong></th>
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<table>
<thead>
<tr>
<th><strong>Anomalous Fish Observation</strong></th>
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<table>
<thead>
<tr>
<th><strong>Specimen</strong></th>
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<table>
<thead>
<tr>
<th><strong>Aerial</strong></th>
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<table>
<thead>
<tr>
<th><strong>Ground</strong></th>
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</thead>
</table>
RECOMMEND: FULL SSAT/ANAOSBAT SURVEY BE CONDUCTED AT LATER DATE, WHEN SNOW COVER MELTED AND WATER LEVEL DOWN. MANY PATCHES HARD TO SPOT DUE TO WATER DEPTH AND SILT COVER WOULD BE MORE VISIBLE WITH LOWER WATER.

ALSO RECOMMEND MANUAL PICKUP BASED ON 1/3 SURVEYED BUT NOT UNTIL WATER GOES DOWN AND IMPACT IS ACCESSIBLE.

ALSO HAD TBIST/S AND 5T CT/L/SM ON BANK OF LAGOON ABOVE WATER LEVEL.
TO: Tom Kelly  
Exxon, Anch.  

DATE: 5-19-90

FROM: Ed Weiss  
AFG, Koakax  

No. Pages: 3  
(including this page)

MESSAGE:
Did not make diagram. Used Anadssat 06 diagram.
The beach at this stream site is very high energy characterized by well-rounded pebble and cobble. A bedrock outcrop guards the stream mouth which breaks through a high storm bar and large log jam. The beach was depauperate.

A very large lagoon was present behind the storm bar. The backshore was about 50 percent covered by snow and couldn’t be surveyed. About half of the remaining shore was surveyed. Small amounts of tar balls and patties were observed in the grass at the water’s edge. Some mousse was present on submerged cobble in the lagoon. The extent of oiling of submerged rocks couldn’t be determined.

Large numbers of water fowl were observed at the north end of the lagoon. The area is obviously used for feeding and possibly nesting.

A brown bear skull (no mandible or teeth) was found at the water’s edge in the lagoon. It was left in place.
ANADROMOUS FISH STREAM ASSESSMENT

REGION: KODIAK

SEGMENT: ST/K09-12-XX

SUBDIVISION: A

STREAM NO: 262-10-10040

THIS IS A TWO PART SURVEY DUE TO SNOW COVER DURING THE FIRST SURVEY.
ANADROMOUS FISH STREAM EVALUATION

SEGMENT ST/K09-12 - XX8DO STREAM NO: 262-10-10040 DATE 6/1/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:

1A  Salmon stream mouth - fry outmigration (4/15 to 7/31)
1B  Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)
5S  Shorebird/waterfowl concentration (4/25 to 5/15)

See attached Ecological Constraint sheet for specific constraints and contracts.

SHPO SIGNATURE: Charles W. Jones DATE: June 29, 1990

Subsurface Oil Observed: Yes ___ No ___ X ___ Maximum Depth ___

RECOMMENDATIONS:

____ No Treatment Recommended  ____ Snare/Absorbent Booms
____X Treatment Recommended   ____ Oil Snares (pom poms)
____ Manual Pickup            ____ Absorbents (pads, rolls, etc)
____ Bioremediation            ____ Spot Washing: ____ Wands
____ Tarmat Removal            ____ Beach Cleaner
____ Bioremediation
____ Tarmat Removal
____ Bioremediation
____ Tarmat Removal

COMMENTS: Recommended treatment is manual removal of mousse, patties and oiled debris as shown on attached sketch map.

TAG COMMENTS: Survey area not previously surveyed.

TAG APPROVAL DATE: 6/18/90
ADEC     EXXON   NOAA   USCG
Ron Mcghee  Ann Tarr  Jerry Talbot  G.A. Peterson
FOSC: O.Tamura DATE: 6/18/90
See attached constraint.
G.A. Peterson
FIELD SHORELINE COMMENT SHEET

Triple Lakes Creek

SEGMENT ST 1 K-912/XX500 SUBDIVISION: Stream # 262-10-10090 DATE 6/4/90

NAME Tom Callahan SIGNATURE Tom Callahan

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

The storm term has moved and partially blocked the stream mouth, causing the lagoon level to rise. This occurred after move mousses floated in and settled along an edge of the lagoon. As a result, mousses was found incorporated with flooded vegetation in 2-3 ft of water. This mousses/vegetation mixture is recoverable and is still able to cause a sheen when disturbed. Suggest this be removed prior to salmon spawning in the area containing mousses.

ADEC

NAME Terry Ellsworth SIGNATURE Terry Ellsworth

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS Oil occurs as cut-st on cobbles, driftwood and trash and as a mousses-vegetation mat within the lagoon. The oiled cobbles and ms-veg mat are presently submerged under 30 cm of water at 3 M from the present shoreline. A thin film of silt covers the area making it difficult to see. Water level in the lagoon is not influenced by daily tidal action. Survey was not completed due to bear on the nearby beach. Manual removal of ms-veg mat and driftwood and cleaning of heavy coat cover on cobbles is recommended before fish spawn. If assessment is not completed before treatment, it should be completed before crew finishes in the area.

LAND MANAGER M.A. SIGNATURE

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS
FIELD SHORELINE COMMENT SHEET

SEGMENT ST/KC-12 &/52 SUBDIVISION: Triple Lakes Creek DATE 6/8/96

NAME: JEFFREY P. BARNHART  SIGNATURE: Jeffrey P. Barnhart

□ NO TREATMENT RECOMMENDED  □ TREATMENT SUGGESTED

See ADF&G Analysis Form for complete details.

Recommend removal of oiled vegetative mats from under the water. Oiled cobble/pebble should be removed from the water cleaned and replaced.

The oiled cobble/pebble/vegetative mats are difficult to located as a thin film of silt covers them under the water.

ADF&G Habitat Division personnel need to be present during cleanup to locate the problem areas.

A complete survey needs to be conducted as it is suspected additional oiled vegetative mats/oiled cobble are present in this low energy lagoon.

Jeff Barnhart
SHORELINE OILING SUMMARY

- OFF. J. Spibling USEG NOAA T. Collapan SEGMENT ST/ K-912/xx5/s
- BIO. D. Lohse LAND REP. T. Barahart SUBDIVISION A Stream 222-10-10045
- EXXON PARK SERVICE R. Waver/ADEC T. Ellisworth TIME 18:20 to 19:30
- TEAM NO.: 19 TIDE LEVEL: +2 to +4 DATE 06/10/190
- EST. SUBDIVISION LENGTH: 900 m
- UPLANDS DESCRIPTION: ☑ Grass ☐ Forest ☐ Rock
- SURVEYED FROM: ☑ Boat ☐ Helo WORKING DIRECTION: S to N
- SURFACE SEDIMENTS: % R % B % C % P % G % S % M % V 20%
- SLOPE: Lang 100 % Hang Vert %
- OIL CATEGORY LENGTH: W m M m N 10 m VL 100 m NO 232 m
- OIL SURFACE: ○
- DISTRIBUTION OIL
- ALM COLOR IMPACTED
- ZONES
- PAVEMENT: H F S sq. m by cm
- PATTIES / TARBALLS 50 BAGS
- NEAR SHORE SHEEN? ☑ BR RW SL TL
- OILED DEBRIS AMOUNT
- OIL FILM COLOR PIT
- ZONE
- SUBSURFACE OIL
- PIT NO. PIT DEPTH (cm)
- SUBSURFACE OIL CHARACTER
- OILED INTERVAL (cm-ch)
- OIL / FILM COLOR
- IMPACTED ZONES
- OIL / FILM COLOR
- PIT ZONE
- A NA
- SUBSURFACE SEDIMENTS
- COMMENTS Oil is submerged in lagoon. "Tarballs" occur as black spatters clinging to cobbles. "Mousse" occurs in matts clumped together with vegetation. Lagoon is in supratidal zone isolated from daily tidal action. Lower and mid-intertidal zones were not surveyed. The survey of 5/7/90 did not cover supratidal zone or most of backshore. This survey completed the supratidal and backshore.
SKETCH MAP

NOT SURVEYED - BEAR PRESENT.

NO OILED VEGETATION.

OILED OA.

LEGEND

1 ▲
- No Subsurface Oil

2 ▲
- Subsurface Oil

A
- Continuous Distribution

B
- Broken Distribution

P
- Patchy Distribution

S
- Splashed Distribution

E
- Oiled Vegetation

Photo location, direction, and number

OIL CHAR.

LENGTH (m): AP PO CV CT ST MS... PT TB FL NO 232 U 550
**ADFG MULTI-ASSESSMENT DATA FORM**

<table>
<thead>
<tr>
<th>1 SURVEY TYPE:</th>
<th>09ES 09SS 09TS 09AVG 09SCHA 099865 09PTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 REGION:</td>
<td>P8X KPC1 KAP</td>
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<tr>
<td>METHOD:</td>
<td>Aerial (ground) Boat</td>
</tr>
</tbody>
</table>

| 3 DATE: | 6/1/90 |
| 4 START TIME: | 1836 |
| 5 STOP TIME: | 1930 |
| 6 SEGMENT #: | 1X520 |
| 7 STATION #: | 10 |
| 8 K-UNIT #: | K09-12 |
| 9 STAT AREA #: | 402-10+0006 |
| 10 LAT: | 58°43'24" |
| 11 LONG: | 153°25'26" |
| 12 SOURCE: | Map (area) |
| 13 LOCATION: | Douglas Reef Area, At Peninsula |
| 14 DESCRIPTION: | 1/5 miles N.W. of St. Bathans Dark |

**EXTENT OF OIL**

<table>
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<tr>
<th>SHORELINE</th>
<th>STREAM</th>
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<td>L</td>
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<table>
<thead>
<tr>
<th>27 SURFACE COVERAGE</th>
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<table>
<thead>
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<th>28 SURFACE THICKNESS</th>
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<table>
<thead>
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<th>30 OVERALL OIL IMPACT:</th>
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<th>VL</th>
<th>( )</th>
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<th>31 OIL TYPE:</th>
<th>Fossil</th>
<th>House</th>
<th>Tar</th>
<th>Asphalt</th>
<th>Sticky</th>
<th>Stain</th>
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<th>32 OILED DEBRIS</th>
<th>( )</th>
<th>N</th>
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<table>
<thead>
<tr>
<th>33 SHORELINE TYPE:</th>
<th>Headland</th>
<th>Low-Lying Rocks</th>
<th>Beach</th>
<th>Cove</th>
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<tbody>
<tr>
<td></td>
<td>Lagoon</td>
<td>Marsh</td>
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<tr>
<th>34 WAVE EXPOSURE:</th>
<th>High</th>
<th>Moderate (Low)</th>
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<th>35 SUBSTRATE TYPE:</th>
<th>Bedrock</th>
<th>Boulder</th>
<th>Cobble 40</th>
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<table>
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<th>40 GRAVEL</th>
<th>30</th>
<th>Sand</th>
<th>Mud/silt 30</th>
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<table>
<thead>
<tr>
<th>41 OIL ON BEACH ADJACENT TO MOUTH (Y/N) (within 50 meters)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>42 OIL WITHIN 1 MILE OF STREAM (Y/N)</th>
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<tbody>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>43 OIL ON STREAM BANK (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>44 ANOMALOUS FISH PRESENT (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>45 ANOMALOUS FISH OBSERVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Species</td>
</tr>
<tr>
<td>---------</td>
</tr>
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</tbody>
</table>

**COMMENTS:** Oil character: ST TB CT/P on cobble along shore of lagoon and under 1 to 2 ft. of water. In addition, two areas, one 3m x 8m (25% coverage) and a second linear (40% coverage) contain mats of vegetation and sticky tar in 1-2 feet of water. Oiled debris: LVF/ME. Survey in complete due to presence of bear. NPS, RFO decision: Recommend removal of oiled vegetative mats from under the water. Oiled cobble/pebble should be removed for the water cleaned and replaced. It is suspected additional oiled vegetative mats are present in the lagoon.
Ref: K09-12-XX500  
(262-10-10040)

July 2, 1990

The National Park Service (NPS) will agree to the treatment recommendation on the segment referenced above only under the conditions specified by this office on May 15 and 21, 1990. The Technical Advisory Group (TAG) did not recognize the constraints made by the NPS. If TAG specifies the constraints, then treatment can be approved. The specific constraints include:

- Viable/live marsh vegetation should be left intact.
- NPS on-site monitor will be required. We suggest additional ADF&G monitors be present during cleanup due to the extreme sensitivity of the impacted habitat and the difficulty of finding the submerged mousse/vegetation mats.
- Special Use Permit will be required.

Cordell J. Roy  
Acting Chief, Office of Oil Spill Coordination
Ref: K0912-XX500, Stream # 262-10-10040

1. The Coast Guard agrees with the constraints outlined in the enclosed National Park Service letter of 7/2/90 for referenced segment. These constraints shall be adhered to during treatment procedures.

D.E. CIANCAGLINI
Federal On-Scene Coordinator
SHORELINE EVALUATION

SEGMENT ST/K09-14-SK-101 SUBDIVISION A (1 OF 1) DATE 4/26/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
No specific constraints identified.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: ____________________________ DATE: 5/6/90

OILING CATEGORIZATION:
Wide 0 m: Medium 349 m: Narrow 28 m: V.Light 1545 m: No Oil 4329 m
Subsurface Oil Observed: Yes ___ No ___ Maximum Depth ___

RECOMMENDATIONS:
___ No Treatment Recommended ___ Snare/Absorbent Booms
___ Treatment Recommended ___ Oil Snares (pom poms)
___ Manual Pickup ___ Absorbents (pads, rolls, etc)
___ Bioremediation ___ Spot Washing: ___ Wands
___ Tarmat Removal ___ Beach Cleaner
___ Other (see comments)

COMMENTS: Recommended treatment includes 1) manual pickup of mousse, oiled debris, oiled trash and oiled bags followed by bioremediation. No specific ecological time constraints identified.

TAG COMMENTS:
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

TAG APPROVAL DATE: 5/14/90
ADEC A.R. Weier_____________ DATE: 5/14/90
EXXON H.M. McKay_____________
NOAA Ray Dedun, Area Safety
USCG G.J. Heiter, Capt.
KODIAK ECOLOGICAL CONSTRAINTS

1A. Salmon stream mouth - fry outmigration (6/15 to 7/31)

1B. Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio-remediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C. Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D. K dolor Bay Hatchery releases
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H. Remote release site
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1L. Gill net area

1J. Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/ Olga Bay (6/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

1K. Purse seine hook-off

1L. Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-3214

2M. Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to minimum. Avoid damage to unlined intertidal and subtidal areas and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-3214

3N, 3P. Harbor seal and sea lion pupping (5/10 to 7/1)

3O, 3Q. Harbor seal and sea lion molting (5/15 to 9/15)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of lnipol which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 566-7235

ADF&G Don Calkins 267-2403

5R. Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S. Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Roth 267-2200

5T. All Bald Eagle nests (5/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U. Recreation: Tent sites (5/1 to 9/15)
6V. Anchorage (6/1 to 9/15)
6W. Forest Service cabins (8/1 to 9/15)
6X. Lodge (8/1 to 9/15)
6Y. Special use destination

7Z. Subsistence area: Salmon harvesting (6/1 to 9/30)
7N. Finfish harvesting
7H. Deer harvesting (8/1 to 1/7)
7J. Invertebrate harvesting
7K. Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or lnipol application which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
FIELD SHORELINE COMMENT SHEET

SEGMENT ST 14

SUBDIVISION: __________ DATE 4.24.90

USCG
NAME: J. D. Haven Jr. GM3, USCG SIGNATURE: 

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

All cited areas are very minimal and are in a high energy environment that will probably dissipate naturally, except for one patch on the NW side of island that could use some attention.

ADEC
NAME: Francine T. Benard SIGNATURE: Francine T. Benard

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

Manual pick-up of mousse-saturated sediments is recommended for an area 10m x 100 m on the NW side of Kikpalik.

This island received a heavy impact of oil. The north, east side of Kikpalik is an extremely high energy environment composed primarily of bedrock and boulder. There is little oil reasonably retrievable on this north, east, south sides. However, a small crew can collect oil on the island's NW side. SSAT field map should accompany clean crew.

LAND MANAGER
NAME: WILL TROYER SIGNATURE: Will Troyer

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

Check this Island carefully. Some light, sea spray and some surf possibly removed most of the oil.

Kikpalik is remote on the NW side that could be manually picked up, but most of the mousse remains in the coastal surf. Should diving by small teams be needed to remove what appears oily effects would be most productive in other areas.
**SHORELINE OILING SUMMARY**

**OG:** Acten  
**BIO:** Davis  
**EXXON NO.:** 20  
**DATE:** 4/25/90  
**TIME:** 10:12:30  
**TEAM NO.:** 20  
**EST. SUBDIVISION LENGTH:** 617.7 m  
**TIDE LEVEL:** -3.5 to +6  
**SUN:** Clouds  
**FOG:** Rain  
**SNOW:**  
**WORKING DIRECTION:**  
**SURVEYED FROM:**  
**SURFACE SEDIMENTS:** R: 35% B: 55% C: 4% P: 2% G: 0% S: 0% M: 0% V: 0%  
**SLOPE:**  
**WAVE EXPOSURE:** Low  
**OIL CATEGORY LENGTH:** W: 0 m M: 400 m N: 35 m  
**SURFACE OIL**

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
<td>Pool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POOLED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVER</td>
<td></td>
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<tr>
<td>COAT</td>
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<tr>
<td>MOUSSE</td>
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<td></td>
</tr>
<tr>
<td>PATTIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TARBALLS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FILM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO OIL</td>
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**SURFACE OIL**

<table>
<thead>
<tr>
<th>PAVEMENT H F S</th>
<th>O O sq. m by</th>
<th>O</th>
<th>cm</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATTIES / TARBALLS</td>
<td>0</td>
<td>BAGS</td>
<td></td>
</tr>
<tr>
<td>NEAR SHORE SHEEN?</td>
<td>No</td>
<td>BR</td>
<td>RW</td>
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**OILED DEBRIS**

<table>
<thead>
<tr>
<th>AMOUNT</th>
<th>OILED DEBRIS</th>
<th>LOGS</th>
<th>VEGETATION</th>
<th>TRASH</th>
<th>DEBRIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD</td>
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</tr>
<tr>
<td>LG</td>
<td></td>
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</table>

**DID YOU COLLECT DEBRIS?**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
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</table>

<table>
<thead>
<tr>
<th>TYPE</th>
<th>0</th>
<th>BAGS</th>
<th>0</th>
</tr>
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</table>

**PHOTOGRAPHS:**

*Roll No. ST-26-7*

*Frames 9-20126-30*

**SUBSURFACE OIL**

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED SUBSURFACE BELOW</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tr>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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</tr>
<tr>
<td>6</td>
<td>5</td>
<td></td>
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</tbody>
</table>

**COMMENTS**

Areas depicted in Sketch maps 2 and 3 (N end of island) had more mousse than in areas depicted in Sketch maps 4 and 5 (E end of island), probably due to increased exposure to wave energy and/or last year's storm clean up. Island substrate is primarily rock platform w/ boulder/rock veneer, which limited pit depth. Very little fine sediment existed on rock platforms, with mousse collected between boulders, rocks, or coating directly on top of the rock platform.

**REVIEWED** YW  
**DATE** 4/27/90
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST 109 - SK 101**

Date (mo/day/yr) 4/15/90

**Time (24 hr) 7:30**

**Biolagist** J. Davis

(A) Substrate type and % of segments:

<table>
<thead>
<tr>
<th>Substrate Type</th>
<th>Dense</th>
<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedrock</td>
<td>35%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Boulder</td>
<td>25%</td>
<td>33%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Cobble</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Pebble</td>
<td>10%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Sand</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Silt</td>
<td>5%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

(B) Overall % cover of biota (% of segment):

- Dense: 25%
- Moderate: 25%
- Low: 60%
- Very Low: 10%

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- Mytilus: Continuous around the island. Sparse, more numerous on the western side of Kuihowski.
- Fucus: Small areas of moderate - sparse patches. Some new growth.
- Barnacles: Continuous around the island. Sparse - moderate on the eastern side. Western side = Dense - Mod.

Photographs:

- Roll No: 57-20-7
- Frames: 8-20, 28-30

**Wildlife Observations / General Comments:**

- Short ears & pink eyes seen on Bluffs. Morgan Sound, Haiggin.
- The old stand was where the level of intertidal fauna and flora, large membership of Round Island's (then in residence) gulls. Turkey gulls,ambo & sea otters. Also, a couple of Steller's sea eagles.

**Ecological Considerations:**

- S boldly colored Glaciers gulls - Eagles nest in spruce trees.
- Note last year only one eagle. This year, Pair of Rough-legged Hawks nesting on cliff. Harbor seals handled out in area. 5 - 6 sea otters feeding in the area.
### Date and Time

**Date**: 4/25/90  
**Time**: 07:30 - 12:30

**Tide Height**: +6.5 ft

#### Sediment Types
- **1**: Bedrock  
- **2**: Boulder  
- **3**: Cobble  
- **4**: Sand  
- **5**: Silty

### Flora

<table>
<thead>
<tr>
<th>Species</th>
<th>Uitz</th>
<th>Mitz</th>
<th>Litz</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Dossiella/Corallina</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Calliarthron/Corallina</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Cladophora</em> SPP</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Costaria</em> SPP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Endocladia Muricata</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Filamentous Greens</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Filamentous Reds</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Gloiopectis Furgata</em></td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Halosaccion Glandiforme</em></td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Laminaria</em> SPP</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Lithothamnion</em></td>
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<td></td>
</tr>
<tr>
<td><em>Nereocystis</em> SPP</td>
<td></td>
<td></td>
<td></td>
<td>On drift and offshore</td>
</tr>
<tr>
<td><em>Porphyra</em> SPP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Ralphsia/Hildenbrandia</em></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><em>Rhodomenia Lardix</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Rhomomenia</em> Palmata</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Scytosiphon</em> SPP</td>
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<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Ulva</em> SPP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Zostera Marina</em></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><em>Enteromorpha</em></td>
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</tbody>
</table>

### Fauna

<table>
<thead>
<tr>
<th>Species</th>
<th>Uitz</th>
<th>Mitz</th>
<th>Litz</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Anthopleura</em> SPP</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>(Sem) Balanus Cariosus</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>B. Glandula</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Bryozoa</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Chitons</em> (other than K. Tunicata)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td><em>Anaspida spp. In pod</em></td>
</tr>
<tr>
<td><em>Clams</em></td>
<td></td>
<td></td>
<td></td>
<td><em>Shell of Chlamys fusiformis</em> Prototheca*</td>
</tr>
<tr>
<td><em>Crabs</em></td>
<td></td>
<td></td>
<td></td>
<td><em>Shell of Chlamys</em> fusiformis* Prototheca*</td>
</tr>
<tr>
<td><em>Dermasterias Imbricata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Katharina Tunicata</em></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Leptasterias Hexactis</em></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><em>Limpets</em></td>
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<td></td>
</tr>
<tr>
<td><em>Littorina</em> SPP</td>
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</tr>
<tr>
<td><em>Nuella</em> SPP</td>
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<td><em>Very numerous</em></td>
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</table>
Segment: K3-16-SK-101
Subdivision: K3-15-SK-101A

Date: 4/25/90

Checklist:
- N Arrow
- Approx. Scale
- Seg/Sub Boundary
- Oil Stain
- Width
- Length
- Substratum Character
- Est. HWL/LWL
- SSL
- Profile Location(s)
- Notes
- Pit Location(s)
- Photo Location(s)

Legend:
1. A
   - No Surface Oil
2. A
   - Subsurface Oil
   - CT/C
     - Continuous Distribution
   - CT/B
     - Broken Distribution
   - CT/P
     - Patchy Distribution
   - CT/S
     - Splashed Distribution

Oil Character Length (m): AP____ PO____ CV____ CT____ ST____ MS____ PT____ TB____ FL____ NO____
"REVISED" ADDENDUM: SUBDIVISION CONSTRAINTS

SEGMENT K09-14-SK-101 SUBDIVISION A (1 of 1)

WORK WINDOW

| Manual Pickup Less Than 400m From Active Nest | CLOSED PRIOR TO 7/1 |
| Manual Pickup Less Than 400m From Active Nest | WORK AFTER 7/1 |
| Manual Pickup More Than 400m From Active Nest | OPEN |
| Bioremediation Less Than 400m From Active Nest | CLOSED PRIOR TO 7/1 |
| Bioremediation Less Than 400m From Active Nest | WORK AFTER 7/1 |
| Bioremediation More Than 400m From Active Nest | OPEN |

ARCHAEOLOGICAL STANDARD CONSTRAINT

If cultural resources are uncovered, PHONE 564-3274.

APPLICABLE ECOLOGICAL TIME CONSTRAINTS

5R Seabird Colony NO CONSTRAINT. Work site is more than 800m from seabird colony.

5T Bald Eagle Nest USFWS 4/9/90 map indicates an active nest in Subdivision A. Closed to manual pickup and bioremediation within 400m of active nest until 7/1. No constraint to manual pickup and bioremediation more than 400m from active nest. All work areas open to manual pickup and bioremediation after 7/1 with USFWS Monitor present.

OTHER ECOLOGICAL CONSIDERATIONS

Restrict air traffic and all disturbance to essential minimum. No personnel or boat traffic within 400m of active nests. Air approach and takeoff from and to seaward only; maintain 400m horizontal, 300m vertical distance from active nests. Avoid any unnecessary disturbance or damage to uncollected biota and substrate.
Work action buffer zone area approved with monitor on site after July 1.
Mike thru 6/14/90

USFWS Info. from
6/15/90 Letter to Remounter
from Reg. Director (Seabird Info.)
SEGMENT ST/ K09-15-SB-101 SUBDIVISION A (1 OF 1) DATE __4/28/90__

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O,3Q Harbor seal and sea lion molting (8/15 to 9/15)
4LL National Parks
5R Seabird colony (5/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoi/ed biota and substrate.

SHPO SIGNATURE: Michael [Signature] DATE: 5/15/90

OILING CATEGORIZATION:
Wide 34 m: Medium 0 m: Narrow 47 m: V.Light 469 m: No Oil 1179 m
Subsurface Oil Observed: Yes X No Maximum Depth 20 cm

RECOMMENDATIONS:
_____ No Treatment Recommended
X Treatment Recommended
_____ Manual Pickup
_____ Bioremediation 8/1 5/1
_____ Tarmat Removal
_____ Snare/Absorbent Booms
_____ Oil Snare (pom poms)
_____ Absorbents (pads, rolls, etc)
_____ Spot Washing: Wands
_____ Beach Cleaner
_____ Other (see comments)

COMMENTS: Recommended treatment includes 1) bioremediation of area indicated on attached sketch map. Work should be conducted between 7/1 and 8/15 based on pinniped constraints with approval of USFWS regarding seabird colony.

TAG COMMENTS: Bioemcents Arrays of TP 5, 7, 8

TAG APPROVAL DATE: 5/15/90
ADEC
EXXON
NOAA
USCG

FOSC: [Signature] DATE: 5/20/90
Kodiak Ecological Constraints

1A Salmon stream mouth - try outmigration (4/15 to 7/31)

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2290

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Petz 424-3214

1D Kotzebue Hatchery release

1E Salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

Remote release site

No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or in-situ application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Petz 424-3214

1J Gill net area

Mainland, West side Kodiak; Shuyak & Moser/Olga Bay (6/9 to 10/1)

East side Kodiak, East side Afognak (7/4 to 10/1)

1K Purse seine area

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or in-situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Petz 424-4791

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or in-situ application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

3N Harbor seal and sea lion pupping (5/10 to 7/1)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of in-situ within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235

ADF&G Don Calkins 267-2403

4R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADF&G Tom Rothy 267-2208

6T All Bald Eagle nests (5/1 to 6/1)

Active Bald Eagle nests (5/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Aircraft approach and takeoff from and to nests vertically; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:

Test sites (5/1 to 9/15)

Anchorage (5/1 to 9/15)

Forest Service cabins (5/1 to 9/15)

Lodge (5/1 to 9/15)

Special use destination

7Z Subsistence area: Salmon harvesting (5/1 to 6/30)

7H Fire fishing harvesting

7I Deer harvesting (5/1 to 1/7)

3J Invertebrate harvesting

4K Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If USFWS for treatment include methods such as hot water wash or application of in-situ which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
K0915

SEGMENT ST  SB-101 SUBDIVISION:  A DATE: 4/28/90

USCG NAME: AEC Vandegrift SIGNATURE: AEC Vandegrift

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

ADEC NAME: Michelle Baer SIGNATURE: Michelle

☐ NO TREATMENT RECOMMENDED ☑ TREATMENT SUGGESTED

COMMENTS

Recommend a small crew (<10) recover TBs, and spots with CV on underlying layer. Hand-size CV should also be recovered with 50% of area can be found by referencing map descriptions and pit #’s. Concentrate efforts on East side, with pickups of TBs made at designated areas on West side. Keep crews off areas above SWZ to avoid disturbing bird colonies.

LAND MANAGER

NAME: Janis Meldeum SIGNATURE: Janis Meldrum

☐ NO TREATMENT RECOMMENDED ☐ TREATMENT SUGGESTED

COMMENTS

Tar balls and oil covered cobble and sediment could be manually removed with shovels.
The majority of the Subdivision is Lang and Hang Rock and Boulder - un-oiled or with occasional small splatters of Oil and Stain along the Sitz. The West side of the Islet is mostly un-oiled with the exception of small soft sandy Tar Balls on the Hang Boulders bordering the large sandy beach in the center. The North side of the Islet has a small Lang Cobble/Pebble/Granule/Sand and a Lang B/C Beach with splashes of Stain/Coat and oiled driftwood on the Sitz. Oiled logs have splatters on them.
## Subsurface Oil (Continued)

<table>
<thead>
<tr>
<th>Pit No.</th>
<th>Pit Depth (cm)</th>
<th>Subsurface Oil Character</th>
<th>Oiled Interval</th>
<th>Below Oil</th>
<th>Oil Film Color</th>
<th>Pit Zone</th>
<th>Ana SHEEN (YY)</th>
<th>Surf Subsurf Sedim.</th>
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<td>B/C - C</td>
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</table>

### Comments

The East Side of the Islet has 3 long Boulder/Cobble beaches with Boulder shoulders. The coating become patchy on the Boulder shoulders and widens to 3m width along the sitz for lengths of 5, 10 and 30m. The 10m long area in the vicinity of Pit 8 has a few cobbles and boulders whose interstices have a shiny, unweathered cover. The Southernmost B/C beach area has a 10m wide X 50m long [C73 S73] along the u-sitz but no subsurface penetration.

All oil (except the cover) is extremely weathered and the coat is almost dried to a stain. Most oiling is in the form of sporadic splashes and spots between 2 cm diameter and 20 cm diameter. No sketches included due to light & uniform oiling & geomorph. Reviewed by [Name] Date 2 May 20[...].
### Segment ST/SC 10

**Subdivision:**

**Date (mo/day/yr):** 9/28/70

**Time (24 hr):** 0850-1130

**Biologist:** Cran

**Date:** 10/4

### Substrate type and % of segments:

1. Bedrock 35
2. Boulder 30
3. Cobble 15
4. Pebble 10
5. Sand 10
6. Silt

### Overall % cover of biota (% of segment):

- Moderate 15
- Low 75

### Density, substrate preference (by number from A, above), & vertical zonation of major taxa:

- Juveniles / adults (x), new settlement (3)

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<thead>
<tr>
<th>Substrate Type</th>
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<th>Moderate</th>
<th>Sparse</th>
<th>Rare</th>
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</table>

### Wildlife Observations/ General Comments:

- Other in U172 cobble appeared to be in labor
- Gulls - Glaciers-winged and Mew? (much smaller than Gull), visible breeding at hi 4 Cormorants
- Barrows Goldeneye
- Oystercatchers
- Tufted Puffins, Puffins
- Swallows, hoodie
- Pigeon Guillemot
- 7 Others (counts made only for flying birds. Did not enter colony)
- NPS rep. found fresh dead gull in U172 - no apparent oiling.
General Comments

- Subdivision is an exposed islet with a sandy beach area (one on the SE corner and the other on the west side), an extensive rock bench (along the east side) and small rock and boulder headlands. Above the rock bench, the MITZ and UITZ comprises of boulder fields and rockock.

The uplands appear to be grassy and a breeding area for gulls. Several other species of birds were also observed but not in the great numbers as the gulls. I did not walk into the uplands, therefore, nesting information not available.

- On the Southern end of the islet in the upper UITZ cobble there was an oyster present. It appeared to be in labor as abdominal contractions were visible and although it made hissing noises it did not leave.

- At the Northern end of the islet there is a Zostera bed, on the East side a Laminarian bed (beginning at the -4' tide level). 70% Bladed reds cover on the UITZ rock: boulders.

- Throughout the MITZ there are sporadic sparse patches of Fucus.

- Mussels not observed on West side of islet; on east side a rare individual was found under cobble and there were 3 1m² patches in the MITZ boulder SW end.

- Littorina sparse on sand but throughout rest of Segment substrate and in all zones this was the most dense population I've seen this spring.

- Segment appears healthy.
WORK PLAN ADDENDUM

Segment K09-15-SB-101  Subdivision A  Dated 5/22/90

MODIFICATION

1. REASON FOR MODIFICATION
   • FOSC Request
   • Landowner comments

2. ADJUSTMENT TO WORK PLAN
   • No bioremediation

SHPO APPROVAL NEEDED ___ YES ___  SHPO SIGNATURE _______________________

NO ___ X ___

TAG APPROVAL DATE 5/31/90
ADEC Art Weiner Art Weiner
EXXON Anny Taran Art
NOAA Joseph Talbot John
USCG G. A. Frink E. A. Baier
SHORELINE EVALUATION

SEGMENT ST/ K09-15-SB-102 SUBDIVISION A (1 OF 1) DATE 4/28/90

SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N, 3P Harbor seal and sea lion pupping (5/15 to 7/1)
3O, 3Q Harbor seal and sea lion molting (8/15 to 9/15)
4LL Set net sites (6/11 to 7/25)
5R Seabird colony (5/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

SHPO SIGNATURE: Michael Osberg DATE: 5/15/90

OILING CATEGORIZATION:
Wide...0 m: Medium...0 m: Narrow...0 m: V.Light...1162 m: No Oil...0 m
Subsurface Oil Observed: Yes...No X Maximum Depth________

RECOMMENDATIONS:
X No Treatment Recommended _____Snare/Absorbent Booms
_____Treatment Recommended _____Oil Snare (pom poms)
_____Manual Pickup _____Absorbents (pads, rolls, etc)
_____Bioremediation _____Spot Washing: _____Wands
_____Tarmac Removal _____Beach Cleaner
_____Other (see comments)

COMMENTS: ________________________________

_______________________________

_______________________________

_______________________________

_______________________________

TAG COMMENTS: _________________________

_______________________________

_______________________________

_______________________________

TAG APPROVAL DATE: 5/15/90
ADEC EXXON NOAA USCG

DATE: 5/15/90

DATE: 5/15/90
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - dry outmigration (4/15 to 7/31)
1B Salmon stream mouth - spawning (7/15 to 9/10, PEAK 8/15)
No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bioremediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels, such as manual removal, can probably proceed without adherence to time constraints. In any case, contact ADF&G prior to treatment for consultation or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Middleton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for consultation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

1D Koto Bay Hatchery release
Pink salmon - late May, early June; Chum salmon - June; Sockeye salmon - early July.

1H Remote release sites
No use of methods which might affect nearshore oil or toxicity levels, such as hot water wash or lnipol application, unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal, can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Peltz 424-3214

2I Gill net area

2J Purse seine area
Mainland, West side Kodiak, Shuyak & Moser/Olga Bay (5/9 to 10/1)
East side Kodiak, East side Afognak (7/4 to 10/1)

2K Purse seine hook-off

2L Set net sites
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 424-4791

2M Herring spawning (4/15 to 6/30)
Contact ADF&G for confirmation - dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to unjured intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or lnipol application which might affect nearshore oil or toxicity levels, contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 486-4791

2R Harbor seal and sea lion pupping (5/10 to 7/1)
Harbor seal and sea lion molting (8/15 to 9/15)
Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of lnipol within two weeks of arrival dates (work window at these sites is limited to 7/2 to 7/31). Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 586-7235
ADF&G Don Calcines 267-2403

5R Seabird colony (5/1 to 9/1)
Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal, 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)
Restrict all activity to essential minimum, especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377
ADF&G Tom Rothby 267-2206

5 All Bald Eagle nests (3/1 to 6/1)
Active Bald Eagle nests (3/1 to 9/1)
Restrict air traffic and all disturbance to essential minimum. No personnel within 400m. Air approach and takeoff from and to seaward only; maintain 800m horizontal, 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation:
Tent sites (8/1 to 9/15)
Anchorage (8/1 to 9/15)
Forest Service cabins (8/1 to 9/15)
Lodge (8/1 to 9/15)
Special use destination

7R Subsistence area: Salmon harvesting (8/1 to 9/30)

7P Fiish harvesting

7H Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)
Contact ADF&G and appropriate Native Corporation for specific dates, locations, and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of lnipol which might affect intertidal or nearshore oil or toxicity levels, contact ADF&G and appropriate Native Corporation for authorization - see Native Corporation Contact List for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
No treatment recommended due to very light, sporadic, small droplet sizes of CT and ST splatters throughout segment. Area is very high energy. Suggest treatment left to natural wave energy.

A comprehensive survey of islands in this segment was not completed due to the rising tide. Oil observed was in a weathered state and could only reasonably be removed by intensive scrubbing of rock surfaces.
SHORELINE OILING SUMMARY

REVISION NO 06-10

TEAM NO. 5

TIDE LEVEL +1 ft +4 ft

DATE 4/12/90

EST. SUBDIVISION LENGTH: 18.14 m

SURVEYED FROM: 300 ft Heli

SURFACE SEDIMENTS: R 40 % B 35 % C 5 % P 5 % G 5 % S 10 % M 0 % V 0 %

SLOPE: Lang 25 % Hang 50 % Vert 25 %

WAVE EXPOSURE: □ Low □ Med □ High

OIL CATEGORY LENGTH: W 0 m M 0 m N 0 m VL 18.14 m NO 0 m

SURFACE OIL

<table>
<thead>
<tr>
<th>CHARACTER</th>
<th>DISTRIBUTION</th>
<th>OIL / FILM COLOR</th>
<th>IMPACTED ZONES</th>
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<tbody>
<tr>
<td>ASPHALT PAVEMENT</td>
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<td>PATTIES</td>
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<td>TARBALLS</td>
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<tr>
<td>FILM</td>
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<tr>
<td>NO OIL</td>
<td>X</td>
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</tbody>
</table>

PAVEMENT H F S __ sq. m by ___ cm

PATTERNS / TARBALLS _______ BAGS

NEAR SHORE SHEEN?  NO  BR RW SL TL

OILED DEBRIS AMOUNT

LOGS  SM MD LG

VEGETATION  TYPE ___

TRASH  #BAGS ___

Debris

Photographs:

Roll No. None

Frames ___

SUBSURFACE OIL  NONE = ALL HANG / LANG / VERT ROCK AND BOULDER / BURB

<table>
<thead>
<tr>
<th>PIT NO.</th>
<th>PIT DEPTH (cm)</th>
<th>SUBSURFACE OIL CHARACTER</th>
<th>OILED INTERVAL</th>
<th>BELOW OIL / FILM COLOR</th>
<th>PIT ZONE</th>
<th>ANA SHEEN (VIA)</th>
<th>SURFACE / SUBSURFACE SEDIMENTS</th>
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COMMENTS: The subdivision consists of several (8-10) small islets with m-sit of high angle boulder / rock and some vertical rock. At low tide the islets are surrounded and connected by low angle rock and broad sandy tidal flats. The northernmost 4 islets were surveyed by foot and were consistently spotted with very light and sporadic, small droplet size stain and coat splatters. The 4 (or 6?) small southern islets were not surveyed, reviewed, or photographed due to rising tide and an inaccessibility by foot. Due to the uniform conditions of the environment / shoreline, oiling is considered uniform...
NORTH SURVEYED - DUE TO UNIFORM ENVIRONMENTAL AND GEOMORPHOLOGICAL CONDITIONS, THE OILING IS CONSIDERED UNIFORM WITH THE NORTHERN/MOST ISLETS (VERY LIGHT STAIN/COAT SPOTS SPARCELY SCATTERED ALONG THE SITZ ROCK/BOULDERS)

Combining oiling is so light that it occupies less than 1% of the surface sediments.

Oil Character Lengths (ft): CT 907 ST 917 ND 0

<table>
<thead>
<tr>
<th>XXXX Wide</th>
<th>SB-102-A</th>
<th>Exxon Segment Length: 1814 m</th>
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<tr>
<td>////////// Medium</td>
<td>Approx. Segment Length: 1858 m</td>
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<tr>
<td>------ Narrow</td>
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<tr>
<td>TTTT Very Light</td>
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<tr>
<td>O0000 No Oil</td>
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Map Key: AXP-58-102
Name: C. Dillon
Date: 4/28/90
Date Entered:
**SHORELINE ECOLOGICAL SUMMARY**

**K0915**

Segment ST 156.102  Subdivision A  Date (mo/day/yr) 4/28/90

Time (24 hr) 1230-1330  Biologist Crank

---

(A) Substrate type and % of segments:

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(B) Overall % cover of biota (% of segment): Dense 10 Moderate 15 Low 75

(C) Density, substrate preference (by number from A, above), & vertical zonation of major taxa: (upper-U; mid-M; low tidal-L); juveniles/adults (X), new settlement (3)

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**WILDLIFE OBSERVATIONS/GENERAL COMMENTS:**
Uplands did not appear to be part of breeding colony. Only a few Gulls were obs. Digs obs.

**ECOLOGICAL CONSIDERATIONS:**
- High other use on west side more than 100
- Intertidal similar to 8 101 A.
General Comments

- Segment is connected at extreme low tide to SB101. In a hard jet on the N end. This is another stone jetty on the SW side of SB102 between 2 sand jetty near beach.

- In the SW there is a 15 m² area covered with other algae >100% = high other sea weed.

- Between sand area, segment is mainly, brownish green, field. In 1972 the F/C was 90% covered by algae, 70% of this are covered later.

- Intertidal organisms and distribution almost exact to SB101A. Sand oyster tests found on SB102A, not found on SB101A being the only observed difference.

- Segment appears healthy.
SEGMENT ENVIRONMENTAL SENSITIVITIES AND TIME CONSTRAINTS:
3N,3P Harbor seal and sea lion pupping (5/15 to 7/1)
30,3Q Harbor seal and sea lion molting (8/15 to 9/15)
4LL National Parks
5R Seabird colony (5/1 to 9/1)
See attached Ecological Constraint sheet for specific constraints and contacts.

SUBDIVISION ECOLOGICAL CONSTRAINTS:
Avoid any unnecessary disturbance or damage to unoiled biota and substrate.

OILING CATEGORIZATION:
Wide _0_ m: Medium _0_ m: Narrow _0_ m: V.Light _0_ m: No Oil _708_ m
Subsurface Oil Observed: Yes __ No __
Maximum Depth __________

RECOMMENDATIONS:
_____ X No Treatment Recommended
_____ Treatment Recommended
_____ Manual Pickup
_____ Bioremediation
_____ Tarmat Removal

Snare/Absorbent Booms
Oil Snare (pom poms)
Absorbs (pads, rolls, etc)
Spot Washing: Wands
Beach Cleaner
Other (see comments)

TAG COMMENTS:

TAG APPROVAL DATE: 5/15/90
ADEC ________________ EXXON ________________ NOAA ________________ USCG ________________

FOSC: ___________ DATE: 5-14-90
KODIAK ECOLOGICAL CONSTRAINTS

1A Salmon stream mouth - dry out migration (4/15 to 7/31)

1B Salmon stream mouth - spawning (7/15 to 9/10; PEAK 8/15)

No disturbance of stream bed or banks unless authorized by ADF&G. No beach flushing into stream drainage. No bio-remediation or other chemical application within 100m of stream without authorization from ADF&G. No use of methods which might affect nearshore oil or toxicity levels such as hot water wash or impol application, unless authorized by ADF&G. Treatment which is not intrusive and which will not affect nearshore oil or toxicity levels such as manual removal can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for consultation and/or permit application.

AGENCY CONTACT PERSON: ADF&G Ken Moddeiton 267-2299

1C Salmon fry nursery area (4/31 to 7/31)

No use of methods which might affect nearshore oil or toxicity levels such as hot water wash or impol application unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal can probably proceed without adherence to time constraints. Contact ADF&G prior to treatment for confirmation and advice.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3214

1D Kodiak Bay Hatchery release

Pink salmon late May early June Chum salmon June, Sockeye salmon - early July

1H Remote release site

No use of methods which might affect nearshore oil or toxicity levels such as hot water wash or impol application unless authorized by ADF&G. Treatment which will not affect nearshore oil or toxicity levels, such as manual or mechanical removal can probably proceed without adherence to time constraints. Contact ADF&G for confirmation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3214

1J Gill net area

Mainland: West side Kodiak, Shuyak & Moser/Olga Bay (6/9 to 10/1)
East side Kodiak: East side Afognak (7/4 to 10/1)

1K Purse seines

Hook off

1L Set nets

Contact ADF&G for confirmation: dates and locations may vary. Restrict boat and air traffic to essential minimum. When set net sites are present (1L) restrict beach operations to essential minimum as authorized by ADF&G. If plans for treatment include methods such as hot water wash or impol application which might affect nearshore oil or toxicity levels contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Pettz 424-3214

2M Herring spawning (4/15 to 6/30)

Contact ADF&G for confirmation: dates and locations may vary. Restrict boat traffic to essential minimum. Avoid damage to uncoiled intertidal and subtidal algae and seagrass. If plans for treatment include methods such as hot water wash or impol application which might affect nearshore oil or toxicity levels contact ADF&G for consultation and authorization.

AGENCY CONTACT PERSON: ADF&G Larry Nicholson 485-4781

3N 3P Harbor seal and sea lion pupping (5/10 to 7/11)

Restrict boat and air traffic to essential minimum. No personnel within 400m. Aircraft to maintain 800m horizontal and 300m vertical distance from haulouts. No application of impol within two weeks of arrival dates. Contact ADF&G and USFWS prior to treatment for confirmation.

AGENCY CONTACT PERSON: US National Marine Fisheries Service Steve Zimmerman 556-7235

ADFG: Don Calkins 267-2403

5R Seabird colony (5/1 to 9/1)

Restrict air and boat traffic to essential minimum. No personnel within 800m. Aircraft to maintain 800m horizontal and 300m vertical distance from colony. Contact USFWS prior to treatment.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

5S Shorebird/waterfowl concentration (4/1 to 5/15)

Restrict all activity to essential minimum especially air traffic. Contact USFWS and ADF&G for confirmation.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

ADFG: Tom Rotby 267-2206

5T All Bald Eagle nests (3/1 to 6/1)

Active Bald Eagle nests (3/1 to 9/1)

Restrict air traffic and all disturbance to essential minimum. No personnel within 400m 3/1 to 6/1. Air approach and takeoff from and to seaward only. Maintain 800m horizontal 300m vertical distance from nests. Contact USFWS prior to treatment for confirmation of dates.

AGENCY CONTACT PERSON: USFWS Jill Parker 786-3377

6U Recreation

Tent sites (6/1 to 9/15)

6V Anchorage (6/1 to 9/15)

6W Forest Service cabin (6/1 to 9/15)

6X Lodge (6/1 to 9/15)

6Y Special use destination

7Z Subsistence area, Salmon harvesting (8/1 to 9/30)

7H-H Bear harvesting (4/1 to 5/15 and 10/25 to 11/30)

Contact ADF&G and appropriate Native Corporation for specific dates, locations and constraints. Restrict boat and air traffic and beach disturbance to essential minimum. If plans for treatment include methods such as hot water wash or application of impol which might affect intertidal or nearshore oil or toxicity levels contact ADF&G and appropriate Native Corporation for authorization. See Native Corporation Contact list for each Native Corporation's contact person.

AGENCY CONTACT PERSON: ADF&G Jim Fall 267-2359
Survey was done from skiff because it was not possible to walk on rock walls.

No oiling observed from skiff.

Island circumnavigated by skiff; no oil observed. If a foot survey had been possible, it is likely that oil may have been observed in the form and quantity documented in Segment SB 101.

Such oiling would not be easily spotted from a skiff.
**SURFACE OIL**

<table>
<thead>
<tr>
<th>Character</th>
<th>Distribution</th>
<th>Oil / Film Color</th>
<th>Impacted Zones</th>
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<tbody>
<tr>
<td>Asphalt Pavement</td>
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<td>Coat</td>
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<td>Mousse</td>
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<td>Patties</td>
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<td>Tarballs</td>
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<td>Film</td>
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<tr>
<td>No Oil</td>
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**Pavement H F S** ___ sq.m by ___ cm

**Patties / Tarballs** ___ bags

**Near Shore Sheen?** NO BR RW SL TL

**Oiled Debris**

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<tr>
<th>Amount</th>
<th>Did You Collect Debris?</th>
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<td>Vegetation</td>
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<td>Trash</td>
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<td>Debris</td>
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Photographs:

- Roll No.: None
- Frames: ___

**SUBSURFACE OIL**

None (mostly due to lack of subsurface sediments)

**Comments**

The entire subdivision is an islet of vertical and high angle rock and high angle boulder. The subdivision was surveyed entirely by skiff at close proximity and no oil was observed. Foot access is not possible in most places and difficult in the rest (boulders along E side). If a foot survey was performed along the large boulders or closer to the rock crevices it is unlikely that any oil would be more than sporadic stain/coat.
**SHORELINE ECOLOGICAL SUMMARY**

**Segment ST ** SB 03 ** Subdivision A**

**Date (mo/day/yr)** 4/28/90

**Time (24 hr)** 0300-1300

**Biologist** Grant

---

(A) 
**Substrate type and % of segments:**
1. Bedrock 75%
2. Boulder 25%
3. Cobble
4. Pebble
5. Sand
6. Silt

(B) 
**Overall % cover of biota (% of segment):**
- Dense
- Moderate 20%
- Low 80%

(C) 
**Photographs:** No photos

**Roll No.**

**Frames**

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**BARNACLES**

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**Wildlife Observations/General Comments:**
- Entire segment surveyed by skiff; notable to make gastropod observations
- Fucus in a discontinuous 1/2 m band in MITZ. 80% of population spilling
- Mussel in a 50cm x 1/2m band with a sparse concentration. Unable to make recruitment or mortality obs.
- Barnacles in continuous moderate band 30% sparring. Unable to make recruitment or mortality obs.
- UTZ unexpected
- Possible Smalls

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**Ecological Considerations:**
- 20 Gallis